

TECHNICAL NOTES

RANGE TECHNICAL NOTE NO. 3

February 2019

Plant Species Suited for Revegetation by Ecological Site in Wyoming For Use in Determining Range Planting Rates and Seed Mixtures

Many conservation practices rely on revegetation as part of the conservation strategy. There are many factors to consider when developing a planting plan that will influence the success of a planting. One factor is selecting species adapted and suitable to the revegetation site. This Technical Note provides information and resources on the revegetation planning process, species suited to ecological sites in Wyoming, and seeding rates for species that are typically commercially available. It is a general guide; use it in conjunction with other references noted in this document, and work with Area Rangeland Specialists to finalize seeding recommendations.

Step 1: Determine Site Characteristics and Limitations

Determine the site characteristics and recognize how site factors will affect the site's potential. Determine the Major Land Resource Area (MLRA), Land Resource Unit (LRU), Ecological Zone, and Ecological Site using the following climate, soil survey, and ecological site information (see Figures and resource links below). Understanding the site characteristics such as climate, potential vegetation, slope, aspect, and soil properties (e.g. texture, depth, chemistry, rock fragments) will guide species selection for revegetation.

- [Wyoming Climate Summaries](#)
- [Web Soil Survey](#)
- [Ecosystem Dynamics Interpretive Tool \(EDIT\)](#)
- [Ecological Site Information System \(ESIS\)](#)



Figure 1. Use Ecological Site descriptions to determine the site's vegetation potential.

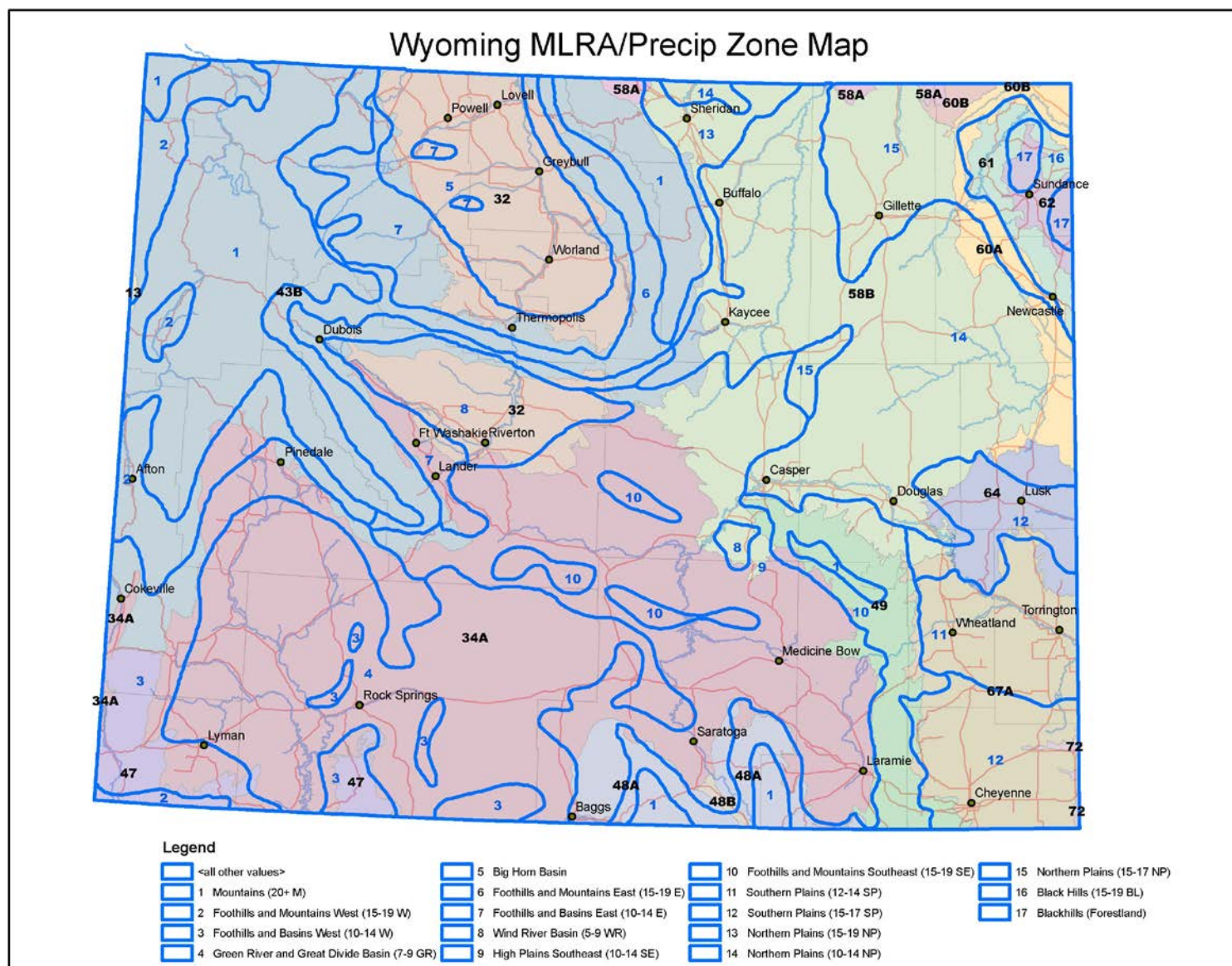


Figure 2. Wyoming MLRA and precipitation zones for Ecological Site descriptions in Wyoming.

Step 2: Determine Project Objectives and Planting Considerations

Clearly state the desired outcomes and timeframe of the project. What is the Desired Plant Community (DPC)? What components of the existing plant community will be changed or maintained? The Reference State described in the Ecological Site Description (ESD) is the “site potential” and can be used to determine if the DPC is realistic and achievable. Determine if the site has been altered to the point that the Reference State is no longer achievable (e.g. chemistry from lower subsurface layers is residing on the surface and a limiting factor to plant adaptation).

Once objectives are set, the details of planting plan can be developed. The following questions may help guide the planning process.

- What will be the future land uses, and what species will achieve the land use objectives? For example, will the site be grazed, and if so, with what kind of livestock and what season of use?
- Is pollinator or wildlife habitat desired? See “Additional References” below for relevant publications ([NRCS 2011](#)).
- Is plant species diversity valued?
- What type of equipment can access the site for site preparation, seeding and planting? The type of equipment used will influence the seed rate. Broadcast seeding rates are double the drilled rate. If the site is a critical area (slope > 8%, severely disturbed), then seeding rates are double the drilled rate; however, if broadcast seeding is used in a critical area then seed at four times the drill rate.

Step 3: Formulate Revegetation Species Composition and Seeding Rates

Use the attached tables to build a revegetation mix with a species composition suited to the Ecological Site. The tables are not an exhaustive species list for the Ecological Site, but instead represent the species in the Ecological Site most likely to be available as seed or container stock. Seed rates in the tables are drill seed rates with 12-inch seed rows. For row spacing greater than 12 inches, calculate seeding rates by:

$$(\text{lb. PLS/ac}) \times (12'' \text{ divided by actual row spacing}) = \text{Actual lb. PLS/ac.}$$

Recommended seed rates account for the number of seeds per pound and the seed size of each species. In general, smaller seeded species are seeded at higher rate seed rates ([NRCS 2013](#)). In addition, seed rates take into account species traits. For example, slender wheatgrass, a short-lived perennial grass that provides quick cover, is recommended at or below 2 lb/ac because higher rates may inhibit the establishment of other seeded species. Cultivars are mentioned in the tables for select species; for example, Maple Grove Lewis flax is recommended because other flax varieties can be aggressive and become dominant ([NRCS 2010a](#)).

Many other factors influence the success of a planting including timing, supplemental watering, monitoring and maintenance, deferred grazing and more. Use the additional references below for more details on seeding and planting for revegetation success.

Example

Site: Sandy Green River Basin (7-9 inches precipitation), no severe limitations.

Planting Objectives: Restoration to the Reference State and provide wildlife habitat (sage grouse nesting) and forage for livestock (summer cattle/winter sheep). Diversity is important for multiple uses

and ecological health, therefore the mid-successional plant community in the Reference State is the DPC (Bunchgrass/Wyoming Big Sagebrush).

Planting Considerations: Site is not a critical area. Seeding method is broadcast; therefore, seeding rates will be two times the drill seed rate.

Seed Mixture Composition and Rate: Based on the Ecological Site description, an appropriate seed mixture is comprised of 60% grass, 15% forbs, and 25% shrubs (see Tables 3). Species were selected that are suited to the site characteristics and the site objectives. Seed rates are derived from Table 3.

Species	Cultivar	Species Composition (%)	Seeding Rate from Table x (% of mix / % from table)	Seeding Rate #PLS/ac (broadcast at 2x normal rate)
Indian ricegrass	Rimrock	30	$1.8 \times (30/30) = 1.8$	$1.8 \times 2 = 3.6$
Needleandthread grass		15	$1.8 \times (15/30) = 0.90$	$0.9 \times 2 = 1.8$
Thickspike wheatgrass	Critana	10	$1.2 \times (10/20) = 0.60$	$0.6 \times 2 = 1.2$
Sandberg bluegrass		5	$0.10 \times (5/5) = 0.10$	$0.1 \times 2 = 0.2$
Scarlet globemallow		2	$0.10 \times (2/5) = 0.04$	$0.04 \times 2 = 0.08$
Rocky Mtn beeplant		1	$0.60 \times (1/5) = 0.12$	$0.12 \times 2 = 0.24$
Firecracker penstemon		5	$0.10 \times (5/5) = 0.10$	$0.10 \times 2 = 0.20$
Prairie flax	Maple Grove	2	$0.15 \times (2/5) = 0.08$	$0.08 \times 2 = 0.16$
Evening-primrose, pale		2	$0.08 \times (2/5) = 0.03$	$0.03 \times 2 = 0.07$
Palmer penstemon*		3	$0.08 \times (3/5) = 0.05$	$0.05 \times 2 = 0.10$
Wyoming big sagebrush		15	$0.20 \times (15/20) = 0.15$	$0.15 \times 2 = 0.30$
Spiny hopsage		3	$0.30 \times (3/5) = 0.18$	$0.18 \times 2 = 0.36$
Fourwing saltbush, winged		5	$0.50 \times (5/5) = 0.50$	$0.50 \times 2 = 1.0$
Winterfat		2	$0.05 \times (2/5) = 0.02$	$0.02 \times 2 = 0.04$
TOTAL		100		9.35PLS lb/ac

*Not native to the site, subject to approval by land manager on federal lands.

Additional Resources:

NRCS. 2019. Montana-Wyoming Plant Materials Program publications. [Available online:](https://www.nrcs.usda.gov/wps/portal/nrcs/mt/plantsanimals/nrcs144p2_057725/)
https://www.nrcs.usda.gov/wps/portal/nrcs/mt/plantsanimals/nrcs144p2_057725/

NRCS. 2019. Ecological Site Description (ESD) system for rangeland and forestland. [Available online:](https://edit.jornada.nmsu.edu/page?content=catalog&catalog=3)
<https://edit.jornada.nmsu.edu/page?content=catalog&catalog=3>

NRCS. 2019. Ecosystem Dynamics Interpretive Tool (EDIT). [Available online:](https://edit.jornada.nmsu.edu/page?content=about)
<https://edit.jornada.nmsu.edu/page?content=about>

NRCS. 2019. Web Soil Survey. [Available online:](https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx)
<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

NRCS. 2013. Native grass establishment and performance for well-pad reclamation in Wyoming. NRCS Plant Materials Technical Note MT-90. 21 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mtpmstn11910.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mtpmstn11910.pdf

NRCS 2012. Grass, grass-like, forb, legume, and woody species for the Intermountain West. NRCS Plant Materials Technical Note PM-24. 57 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn10793.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn10793.pdf

- NRCS. 2010a. Perennial vegetation establishment guide, species, cultivars, and seeding rates. NRCS Wyoming Plant Materials Technical Note WY-3. 10 pages. [Available online:](https://efotg.sc.egov.usda.gov/references/public/WY/Plant_Materials_TN_3.pdf)
https://efotg.sc.egov.usda.gov/references/public/WY/Plant_Materials_TN_3.pdf
- NRCS. 2011. Plants for pollinators in the Intermountain West. NRCS Plant Materials Technical Note PM-2A. 40 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn10798.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn10798.pdf
- NRCS. 2011. Principles of seedbed preparation for conservation seeding. NRCS Plant Materials Technical Note PM-13. 17 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn10748.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn10748.pdf
- NRCS. 2005. Improving Sage Grouse Habitat through Revegetation and Rangeland Management. 2 pages. [Available:](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_044208.pdf) https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_044208.pdf
- NRCS. 2006. Warm-season grasses for “extending the green period” in Eastern Wyoming. NRCS Wyoming Plant Materials Technical Note WY-12. 2 pages. [Available online:](https://efotg.sc.egov.usda.gov/references/public/WY/Plant_Materials_TN_12.pdf)
https://efotg.sc.egov.usda.gov/references/public/WY/Plant_Materials_TN_12.pdf
- NRCS. 2002. Reading seed packaging labels and calculating seed mixtures. NRCS Plant Materials Technical Note PM-4. 13 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn04265.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn04265.pdf
- NRCS. 2012. Native shrubs and trees for riparian areas in the Intermountain West. NRCS Plant Materials Technical Note PM-32. 63 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn11230.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn11230.pdf
- NRCS. 2001. Users guide to description, propagation and establishment of wetland plant species and grasses for riparian areas in the Intermountain West. NRCS Plant Materials Technical Note PM-38. 46 pages. [Available online:](https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn380201.pdf)
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn380201.pdf
- Sage Grouse Local Working Group (Upper Green River Basin). 2006. Beneficial Seed Matrix for Sage Grouse, Mule Deer, Antelope. 2 pages. [Available online:](http://www.pinedaleonline.com/brochuresmaps/seedmixbrochure.pdf)
<http://www.pinedaleonline.com/brochuresmaps/seedmixbrochure.pdf>
- University of Wyoming. 2010. Successful Restoration of Severely Disturbed Lands: Seeding Essentials for Reclaiming Disturbed Lands. 14 pages. [Available online:](http://www.wyomingextension.org/agpubs/pubs/B1204.pdf)
<http://www.wyomingextension.org/agpubs/pubs/B1204.pdf>
- Western Region Climate Center. 2019. Wyoming Climate Summaries. [Available online:](https://wrcc.dri.edu/summary/climsmwy.html)
<https://wrcc.dri.edu/summary/climsmwy.html>
- WGFD. 2016. Wyoming Wildscape: How To Design, Plant, and Maintain Landscaping to Benefit People and Wildlife. 100 pages. [Available online:](https://wgfd.wyo.gov/WGFD/media/content/PDF/Wildlife/Nongame/Birds/WGFD_WYWILDSCAPE.pdf)
https://wgfd.wyo.gov/WGFD/media/content/PDF/Wildlife/Nongame/Birds/WGFD_WYWILDSCAPE.pdf

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Abbreviations for Ecological Sites in Wyoming

Abbreviation	Ecological Site Name
As	Aspen Understory
CS	Choppy Sands
CU	Coarse Upland
Cy	Clayey
CyO	Clayey Overflow
DC	Dense Clay
Gr	Gravelly
GrLy	Gravelly Loamy
IC	Impervious Clay
Ig	Igneous
Li	Limy
LiSb	Limy Subirrigated
LiU	Limy Upland
LL	Lowland
Ly	Loamy
LyA	Loamy Argillic
LyC	Loamy Calcareous
LyL	Loamy Lowland
LyO	Loamy Overflow
LySt	Loamy Steep
MP	Channery Loam
Ov	Overflow
PC	Porous Clay
RH	Rocky Hills
SLy	Steep Loamy
Sa	Sands
SaB	Sandstone Breaks
Sb	Subirrigated
SH	Stony Hills
Sh	Shale
SL	Saline Lowland
SLdr	Saline Lowland, drained
SnLy	Saline Loamy
SS	Saline Subirrigated
SSt	Steep Stony
St	Stony
StOv	Stony Overflow
StLy	Steep Loamy
SU	Saline Upland
SwB	Shallow Breaks
SwCy	Shallow Clayey
SwIg	Shallow Igneous
SwLy	Shallow Loamy
SwLyc	Shallow Loamy, calcareous
SwPC	Shallow Porous Clay
SwSy	Shallow Sandy
Sy	Sandy
SySt	Sandy Steep
SyL	Sandy Lowland
TU	Thin Upland
VS	Very Shallow
WL	Wetland

Table 1. Species Percent Composition and Seed Rates for Revegetation of MLRA 43B - Zone 1 High Mountains (20+M) & Zone 2 Foothills & Mountains West (15 - 19W) Ecological Sites.

TABLE 1. MLRA 43B	PLANT SYMBOL ¹	Cy, DC, SwCy, LyA	LL, Ov, CyO	Ly, Lyc, StLy, SwLy, LySt	Sa, Sy, CU, SwSy, SySt	SSt, St	Swl, lg	Gr, VS	As, Forest	SS, LiSb	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		70%	60%	60%	65%	55%	60%	70%	60%	85%	60%
alkali sacaton	SPAI									20% (0.20)	
bentgrass, rough	AGSC5										5% (0.03)
bluegrass, alpine	POAL2		5% (0.05)						5% (0.05)		
bluegrass, big	POAM	5% (0.10)	5% (0.10)	5% (0.10)	10% (0.20)	10% (0.20)	10% (0.20)	5% (0.10)			
bluegrass, Canby's	POSE	15% (0.15)	10% (0.10)	10% (0.10)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	10% (0.10)		
bluegrass, fowl	POPA2										5% (0.05)
bluegrass, mutton	POFE	20% (0.20)		5% (0.05)		5% (0.05)	5% (0.05)				
bluegrass, Wheeler	PONE2								5% (0.10)		
brome, mountain	BRMA4	15% (1.50)	15% (1.50)	15% (1.50)					20% (2.00)		15% (1.50)
bulrush, alkali ⁴	BOMA7									5% (0.40)	5% (0.40)
bulrush, chairmaker's ⁴	SCAM6									5% (0.40)	5% (0.40)
bulrush, hardstem ⁴	SCACA									5% (0.25)	5% (0.25)
bulrush, panicled ⁴	SCMI2										5% (0.05)
bulrush, softstem ⁴	SCTA2									5% (0.10)	5% (0.10)
cattails	TYLA										5% (0.05)
fescue, Idaho	FEID	10% (0.30)	20% (0.60)	20% (0.60)	15% (0.45)	10% (0.30)	10% (0.30)	10% (0.30)	10% (0.30)		
fescue, Rocky Mountain	FESA	5% (0.15)		5% (0.15)	5% (0.15)	10% (0.30)	10% (0.30)	10% (0.30)			
fescue, spike	LEKI2	20% (0.80)	10% (0.40)	20% (0.80)	20% (0.80)	10% (0.40)	25% (1.0)	10% (0.40)			
fescue, western	FEOC		5% (0.15)	5% (0.15)	5% (0.15)						
hairgrass, tufted	DECE		15% (0.23)							5% (0.08)	30% (0.45)
Indian ricegrass	ACHY	5% (0.30)		5% (0.30)	25% (1.50)	20% (1.20)	20% (1.20)	30% (1.80)			
inland saltgrass	DISP									20% (0.60)	
mannagrass, American	GLGR										5% (0.05)
mannagrass, tall	GLST										5% (0.35)
meadow barley	HOB2									5% (1.25)	5% (1.25)
muhly, alkali ⁵	MUAS									10% (0.10)	
needleandthread ⁶	HECO26				20% (1.20)	5% (0.30)	5% (0.30)	5% (0.30)			
needlegrass, Columbia	ACNE9		15% (0.90)	25% (1.50)	20% (1.20)	5% (0.30)	15% (0.90)	5% (0.30)	20% (1.20)	5% (0.30)	
needlegrass, western ⁵	ACOC3	20% (1.00)	5% (0.25)	5% (0.25)		5% (0.25)		20% (1.00)	5% (0.25)		
Nuttall's alkaligrass	PUNU2									20% (0.20)	
prairie Junegrass	KOMA	5% (0.05)		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			
reedgrass, bluejoint ⁵	CACAM										20% (0.10)

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		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
reedgrass, northern	CAST13									5% (0.03)	25% (0.13)
rush, Baltic ⁴	JUARL									10% (0.03)	5% (0.01)
rush, swordleaf ⁴	JUEN									5% (0.05)	5% (0.05)
sedge, analogue ^{4, 5}	CASI2									5% (0.10)	5% (0.10)
sedge, meadow ⁴	CAPR5										5% (0.15)
sedge, Nebraska ⁴	CANE2									5% (1.25)	30% (1.50)
sedge, small-winged ^{4, 5}	CAMI7										5% (0.10)
sedge, water ^{4, 5}	CAAQ										5% (0.25)
sedge, woolly ^{4, 5}	CAPE42									5% (0.25)	5% (0.25)
sloughgrass, American	BESY									5% (0.20)	5% (0.20)
spike trisetum ⁵	TRSP	5% (0.05)	5% (0.05)	5% (0.05)					5% (0.05)		5% (0.05)
spikerush, beaked ⁴	ELRO2									5% (0.15)	5% (0.15)
spikerush, common ⁴	ELPA3									5% (0.10)	5% (0.10)
squirreltail, bottlebrush ⁶	ELEL5	5% (0.25)		5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)			
wheatgrass, beardless	PSSPI			5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)			
wheatgrass, bluebunch	PSSP6			20% (1.40)	35% (2.45)	50% (3.50)	40% (2.80)	50% (3.50)			
wheatgrass, slender	ELTR7	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)
wheatgrass, streambank ⁷	ELLAL	20% (1.20)		5% (0.30)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)			
wheatgrass, thickspike ⁷	ELLAL	20% (1.20)		5% (0.30)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)			
wheatgrass, western ⁷	PASM	20% (1.20)	20% (1.20)	20% (1.20)	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	20% (1.20)	20% (1.20)	20% (1.20)
wildrye, basin	LECI4	5% (0.30)	30% (1.80)	5% (0.30)	5% (0.30)				15% (0.90)	10% (0.60)	10% (0.60)
wildrye, blue	ELGL		20% (1.20)	20% (1.20)					20% (1.20)	10% (0.30)	10% (0.60)
wildrye, Canada	ELCA4	5% (0.30)	5% (0.30)	5% (0.30)					5% (0.30)	10% (0.30)	10% (0.60)
Forbs		10%	15%	15%	10%	15%	10%	15%	20%	10%	20%
aster,gray	EUGL19		5% (0.05)	5% (0.05)	5% (0.05)						5% (0.05)
balsamroot, arrowleaf	BASA3		5% (0.75)	5% (0.75)		5% (0.75)	5% (0.75)	5% (0.75)			
balsamroot, cutleaf ⁵	BAMA4	5% (0.80)	5% (0.80)	5% (0.80)					5% (0.80)		
beeplant, Rocky Mtn	CLSE			5% (0.60)	5% (0.60)		5% (0.60)	5% (0.60)			
blanketflower	GAAR	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)			5% (0.35)
buckwheat, sulfur	ERUM	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)			
buckwheat, Wyeth	ERHE2		5% (0.30)	5% (0.30)	5% (0.30)						
columbine, Colorado blue	AQCO	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)
coneflower, prairie	RACO3	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)		

TABLE 1. MLRA 43B	PLANT SYMBOL ¹	Cy, DC, SwCy, LyA	LL, Ov, CyO	Ly, Lyc, StLy, SwLy, LySt	Sa, Sy, CU, SwSy, SySt	SSt, St	Swl, Ig	Gr, VS	As, Forest	SS, LiSb	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
coneflower, western ⁵	RUOC2		5% (0.15)	5% (0.15)							5% (0.15)
daisy, fleabane (aspen) ⁵	ERSP4		5% (0.03)	5% (0.03)							5% (0.03)
elephanthead lousewort ⁵	PEGR2			5% (0.25)							5% (0.25)
evening-primrose, Hooker's	OEEL	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			
evening-primrose, pale	OEPA	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)			
evening-primrose, tufted	OECA10	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	
fireweed ⁵	CHAN9	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	
geranium, sticky	GEVI2	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)		5% (0.75)
globemallow gooseberryleaf ⁸	SPGR2			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)			
globemallow, Munro	SPMU2			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)			
globemallow, scarlet	SPCO			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)			
harebell ⁵	CARO2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		
Indian paintbrush, lesser ⁵	CAMIM6		5% (0.03)						5% (0.03)	5% (0.03)	5% (0.03)
Indian paintbrush narrowleaf ⁵	CALI4	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			
Indian paintbrush, splitleaf ⁵	CARH4		5% (0.03)	5% (0.03)					5% (0.03)		5% (0.03)
Indian paintbrush, sulphur ⁵	CASU12		5% (0.03)	5% (0.03)					5% (0.03)		
iris, Rocky Mountain	IRMI									5% (1.00)	5% (1.00)
lupine, silky ^{10, 11}	LUSE4		5% (1.75)	5% (1.75)	5% (1.75)				5% (1.75)		
lupine, silvery ^{10, 11}	LUAR3	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)				5% (0.35)		
milkvetch, Canada ^{10, 11}	ASCA11		5% (0.15)								5% (0.15)
monkeyflower, seep ⁵	MIGU									5% (0.03)	5% (0.03)
mule-ears	WYAM	5% (1.75)		5% (1.75)		5% (1.75)					
penstemon, blue	PECY3				5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)			
penstemon, firecracker	PEEA	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		
penstemon, fuzzytongue ⁵	PEER	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		
penstemon, little-flowered	PEPR2	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)		
penstemon, Palmer ⁸	PEPA8		5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)			
penstemon, Rocky Mtn	PEST2		5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)		
penstemon, Rydberg's ⁵	PERY	5% (0.35)	5% (0.35)	5% (0.35)					5% (0.35)		
phacelia, silverleaf ⁵	PHHA			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)			
scarlet gilia ⁵	IPAG	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		

TABLE 1. MLRA 43B	PLANT SYMBOL ¹	Cy, DC, SwCy, LyA	LL, Ov, CyO	Ly, Lyc, StLy, SwLy, LySt	Sa, Sy, CU, SwSy, SySt	SSt, St	Swl, lg	Gr, VS	As, Forest	SS, LiSb	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
showy goldeneye	HEMU3		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		
sunflower, common woolly ⁵	ERLA6		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		
sunflower, Nuttall's ⁵	HENU	5% (0.50)	5% (0.50)	5% (0.50)					5% (0.50)		
sunflower, one-flowered ⁵	HEUN		5% (1.30)	5% (1.30)	5% (1.30)	5% (1.30)	5% (1.30)	5% (1.30)	5% (1.30)		
sweet anise	OSOC		5% (1.50)						5% (1.50)		5% (1.50)
sweetvetch, northern ¹¹	HEBO	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)		5% (0.90)
tansyaster, hoary	MACA2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			5% (0.03)
Shrubs/Trees		20%	25%	25%	25%	30%	30%	15%	20%	5%	20%
aspen, quaking ⁵	POTR5		5% (C)						20% (C)		5% (C)
bitterbrush, antelope ^{10, 11}	PUTR2			10% (0.20)	20% (0.40)	10% (0.20)	15% (0.30)	5% (0.10)			
buffaloberry, Russett ^{4, 5, 11}	SHCA								10% (C)	5% (C)	
ceanothus, snowbrush ¹¹	CEVE		5% (0.05)	5% (0.05)	5% (0.05)				5% (0.05)		
chokecherry ⁴	PRVI	5% (C)	5% (C)	5% (C)	5% (C)				5% (C)	5% (C)	5% (C)
cottonwood, narrowleaf ⁵	POAN3		20% (C)							5% (C)	5% (C)
currant, golden ^{4, 5}	RIAU		5% (C)						5% (C)		5% (C)
currant, wax ^{4, 5}	RICE		5% (C)						5% (C)		5% (C)
dogwood, redosier ^{4, 5}	COSES										5% (C)
elderberry, blue ^{4, 5}	SANIC5										5% (C)
elderberry, red ^{4, 5, 10}	SARA2										5% (C)
juniper, common	JUCO6	5% (C)	5% (C)	5% (C)	5% (C)				5% (C)	5% (C)	
juniper, Rocky Mountain ⁵	JUSC				5% (C)	5% (C)	5% (C)	5% (C)	5% (C)		
kinnikinnick ⁵	ARUV		5% (0.05)	5% (0.05)	5% (0.05)				5% (0.05)	5% (0.05)	5% (0.05)
maple, Rocky Mountain ^{4, 5}	ACGL								5% (C)		5% (C)
mountain mahogany ^{4, 11}	CELE3					20% (C)	15% (C)				
mountain mahogany, true ¹¹	CEMO2					5% (0.25)	5% (0.25)				
Oregon grape	MARE11		5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		
rabbitbrush, green (yellow)	CHVI8	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	
rabbitbrush, rubber	ERNA10	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)					5% (0.03)	
rose, Woods ⁵	ROWO	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)
sagebrush, big (mountain)	ARTRV	10% (0.10)		20% (0.20)	20% (0.20)	5% (0.05)	5% (0.05)	5% (0.05)			
sagebrush, black	ARNO4					5% (0.05)	20% (0.20)	5% (0.05)			
sagebrush, early (alkali) ⁵	ARARL	20% (0.20)					5% (0.05)	5% (0.05)			

TABLE 1. MLRA 43B	PLANT SYMBOL ¹	Cy, DC, SwCy, LyA	LL, Ov, CyO	Ly, Lyc, StLy, SwLy, LySt	Sa, Sy, CU, SwSy, SySt	SSt, St	Swl, Ig	Gr, VS	As, Forest	SS, LiSb	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
sagebrush, low	ARARA	20% (0.20)				10% (0.10)	5% (0.05)	5% (0.05)			
sagebrush, mountain silver ⁵	ARCAV2		15% (0.15)	5% (0.05)					5% (0.05)		
sagebrush, threetip ⁵	ARTRT2						15% (0.08)				
sagewort, cudweed ⁵	ARLU		5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)			
sagewort, fringed	ARFR4	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	10% (0.05)	5% (0.03)		
sagewort, green (tarragon)	ARDR4			5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			
serviceberry ⁴	AMAL2	10% (C)	5% (C)	5% (C)	5% (C)	10% (C)	5% (C)	5% (C)	10% (C)		5% (C)
shrubby cinquefoil ^{4, 5}	DAFRF	5% (0.05)	5% (0.05)	5% (0.05)					5% (0.05)	10% (0.10)	15% (0.15)
snowberry, mountain	SYOR2	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)		
snowberry, western	SYOC	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		
sumac, skunkbush ⁴	RHTR		5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	
willow spp ⁴	SALIX									5% (C)	20% (C)
winterfat	KRLA2	5% (0.05)		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 2. Species Percent Composition and Seed Rates for Revegetation of MLRA 34A – Zone 3 Foothills & Basins West (10 - 14W) Ecological Sites.

Table 2. MLRA 34A	PLANT SYMBOL ¹	LL, Ov, CyO	Ly, Lyc, SwLy, LySt	Cy, DC, SwCy, LyA	SLdr	Sa, Sy, CU, SwSy, SwB, Swl, Ig	RH, SwLyca	SU, Sh	SS, SL	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		60%	60%	70%	60%	65%	55%	60%	85%	70%	60%
alkali sacaton	SPAI				5% (0.05)				40% (0.40)		
bentgrass, rough	AGSC5										5% (0.03)
bluegrass, big	POAM	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)				
bluegrass, Canby's	POSE	20% (0.20)	10% (0.10)	5% (0.05)		10% (0.10)	5% (0.05)				
bluegrass, fowl	POPA2										5% (0.05)
bluegrass, mutton	POFE	5% (0.05)	5% (0.05)	20% (0.20)		5% (0.05)	5% (0.05)	5% (0.05)			
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
bulrush, alkali ⁴	BOMA7								5% (0.40)		5% (0.40)
bulrush, chairmaker's ⁴	SCAM6								5% (0.40)		5% (0.40)
bulrush, hardstem ⁴	SCACA								5% (0.25)		5% (0.25)
bulrush, panicked ⁴	SCMI2										5% (0.05)
bulrush, softstem ⁴	SCTA2								5% (0.10)		5% (0.10)
cattails	TYLA										5% (0.05)
hairgrass, tufted	DECE					20% (1.20)			5% (0.08)		30% (0.45)
Indian ricegrass	ACHY	5% (0.30)	15% (0.90)	20% (1.20)	25% (1.50)	25% (1.50)	20% (1.20)	25% (1.50)	5% (0.30)	30% (1.80)	
inland saltgrass	DISP				5% (0.15)				20% (0.60)		
mannagrass, American	GLGR										5% (0.05)
mannagrass, tall	GLST										5% (0.35)
meadow barley	HOBR2								5% (1.25)		5% (1.25)
muhly, alkali ⁵	MUAS	5% (0.05)			5% (0.05)				10% (0.10)		
needleandthread ⁶	HECO26	20% (1.20)	10% (0.60)			30% (1.80)	20% (1.20)			20% (1.20)	
needlegrass, Letterman's ⁵	ACLE9	15% (0.60)	15% (0.60)			15% (0.60)	5% (0.20)				
Nuttall's alkaligrass	PUNU2				5% (0.05)				20% (0.20)		
prairie Junegrass	KOMA	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)				
reedgrass, bluejoint ⁵	CACAM										20% (0.10)
reedgrass, northern	CAST13								5% (0.03)		20% (0.10)
rush, Baltic ⁴	JUARL								20% (0.05)		5% (0.01)
rush, swordleaf ⁴	JUEN								5% (0.05)		5% (0.05)
sedge, analogue ^{4, 5}	CASI2								5% (0.10)		5% (0.10)
sedge, meadow ⁴	CAPR5										5% (0.15)
sedge, Nebraska ⁴	CANE2								5% (0.25)		30% (1.50)

Table 2. MLRA 34A	PLANT SYMBOL ¹	LL, Ov, CyO	Ly, Lyc, SwLy, LySt	Cy, DC, SwCy, LyA	SLdr	Sa, Sy, CU, SwSy, SwB, SwI, Ig	RH, SwLyca	SU, Sh	SS, SL	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
sedge, small-winged ^{4, 5}	CAMI7										5% (0.10)
sedge, water ^{4, 5}	CAAQ										5% (0.25)
sedge, woolly ^{4, 5}	CAPE42								5% (0.25)		5% (0.25)
sloughgrass, American	BESY								5% (0.20)		5% (0.20)
spikerush, beaked ^{4, 5}	ELRO2								5% (0.15)		5% (0.15)
spikerush, common ⁴	ELPA3								5% (0.10)		5% (0.10)
squirreldtail, bottlebrush ⁶	ELEL5	5% (0.25)	10% (0.50)	30% (1.50)	15% (0.75)	20% (1.00)	5% (0.25)	30% (1.50)	5% (0.25)	20% (1.00)	
wheatgrass, beardless	PSSPI	5% (0.35)	5% (0.35)			5% (0.35)	5% (0.35)			5% (0.35)	
wheatgrass, bluebunch	PSSP6	5% (0.35)	20% (1.40)			35% (2.45)	30% (2.10)			50% (3.50)	
wheatgrass, slender	ELTR7	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)
wheatgrass, Snake River ^{7, 8}	ELWA2		5% (0.30)	20% (1.20)		20% (1.20)	20% (1.20)	40% (2.40)		20% (1.20)	
wheatgrass, streambank ⁷	ELLAL	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	40% (2.40)	20% (1.20)	20% (1.20)	
wheatgrass, thickspike ⁷	ELLAL	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	40% (2.40)	20% (1.20)	20% (1.20)	
wheatgrass, western ⁷	PASM	20% (1.20)	5% (0.30)			5% (0.30)			20% (1.20)		20% (1.20)
wildrye, basin	LECI4	25% (1.50)	5% (0.30)	5% (0.30)	15% (0.90)	5% (0.30)	5% (0.30)		20% (1.20)		20% (1.20)
Forbs		15%	15%	10%	10%	10%	15%	5%	10%	15%	20%
aster,gray	EUGL19	5% (0.05)	5% (0.05)			5% (0.05)					5% (0.05)
balsamroot, arrowleaf	BASA3	5% (0.75)	5% (0.75)			5% (0.75)	5% (0.75)			5% (0.75)	
beeplant, Rocky Mtn	CLSE	5% (0.60)	5% (0.60)			5% (0.60)				5% (0.60)	
black-eyed Susan	RUHI2										5% (0.03)
blanketflower	GAAR	5% (0.35)	5% (0.35)	5% (0.35)		5% (0.35)	5% (0.35)			5% (0.35)	5% (0.35)
buckwheat, sulfur	ERUM	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	
buckwheat, Wyeth	ERHE2	5% (0.30)	5% (0.30)			5% (0.30)					
columbine, Colorado blue	AQCO		5% (0.15)			5% (0.15)					5% (0.15)
coneflower, prairie	RACO3	5% (0.06)	5% (0.06)	5% (0.06)		5% (0.06)	5% (0.06)				5% (0.06)
coneflower, western	RUOC2	5% (0.15)	5% (0.15)								5% (0.15)
daisy, fleabane (aspen) ⁵	ERSP4	5% (0.03)	5% (0.03)								5% (0.03)
elephanthead lousewort ⁵	PEGR2										5% (0.25)
evening-primrose, Hooker's	OEEL	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)			5% (0.05)	
evening-primrose, pale	OEPA	5% (0.08)	5% (0.08)	5% (0.08)		5% (0.08)	5% (0.08)			5% (0.08)	
evening-primrose, tufted	OECA10	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)	
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)
geranium, sticky	GEVI2	5% (0.75)									5% (0.75)

Table 2. MLRA 34A	PLANT SYMBOL ¹	LL, Ov, CyO	Ly, Lyc, SwLy, LySt	Cy, DC, SwCy, LyA	SLdr	Sa, Sy, CU, SwSy, SwB, Swl, Ig	RH, SwLyca	SU, Sh	SS, SL	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
globemallow gooseberryleaf ⁸	SPGR2	5% (0.10)	5% (0.10)			5% (0.10)					
globemallow, Munro	SPMU2	5% (0.10)	5% (0.10)			5% (0.10)					
globemallow, scarlet	SPCO	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
goldenaster, hairy	HEVI4	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)			5% (0.15)	
harebell ⁵	CARO2	5% (0.05)	5% (0.05)			5% (0.05)					5% (0.05)
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)
Indian paintbrush, lesser ⁵	CAMIM6								5% (0.03)		5% (0.03)
Indian paintbrush narrowleaf ⁵	CALI4	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)			5% (0.03)	
Indian paintbrush, splitleaf ⁵	CARH4	5% (0.03)									5% (0.03)
Indian paintbrush, sulphur ⁵	CASU12	5% (0.03)									5% (0.03)
iris, Rocky Mountain	IRMI								5% (1.00)		5% (1.00)
lupine, silky ^{10, 11}	LUSE4	5% (1.75)	5% (1.75)			5% (1.75)					5% (1.75)
lupine, silvery ^{10, 11}	LUAR3	5% (0.35)	5% (0.35)			5% (0.35)					5% (0.35)
milkvetch, Canada ^{10, 11}	ASCA11										5% (0.15)
monkeyflower, seep ⁵	MIGU								5% (0.03)		5% (0.03)
penstemon, firecracker	PEEA	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)	
penstemon, fuzzytongue ⁵	PEER	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)			5% (0.15)	
penstemon, Great Basin ⁵	PESU2	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)	
penstemon, little-flowered	PEPR2	5% (0.03)	5% (0.03)			5% (0.03)					
penstemon, narrowleaf ⁵	PEAN4	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)			5% (0.15)	
penstemon, Palmer ⁸	PEPA8	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	
penstemon, Rocky Mtn	PEST2	5% (0.08)	5% (0.08)			5% (0.08)	5% (0.08)			5% (0.08)	5% (0.08)
penstemon, thicketleaf ⁵	PEPA6	5% (0.20)	5% (0.20)	5% (0.20)		5% (0.20)	5% (0.20)			5% (0.20)	
phacelia, silverleaf ⁵	PHHA		5% (0.10)			5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
scarlet gilia ⁵	IPAG	5% (0.15)	5% (0.15)			5% (0.15)	5% (0.15)			5% (0.15)	5% (0.15)
sunflower, annual	HEAN3	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	5% (0.90)	
sunflower, common woolly ⁵	ERLA6	5% (0.05)	5% (0.05)			5% (0.05)					
sunflower, Nuttall's ⁵	HENU	5% (0.50)	5% (0.50)	5% (0.50)							5% (0.50)
sweetvetch, northern ¹¹	HEBO	5% (0.90)	5% (0.90)	5% (0.90)		5% (0.90)					5% (0.90)
tansyaster, hoary	MACA2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)
Shrubs/Trees		25%	25%	20%	30%	25%	30%	35%	5%	15%	50%
bitterbrush, antelope ^{10, 11}	PUTR2					15% (0.30)					

Table 2. MLRA 34A	PLANT SYMBOL ¹	LL, Ov, CyO	Ly, Lyc, SwLy, LySt	Cy, DC, SwCy, LyA	SLdr	Sa, Sy, CU, SwSy, SwB, Swl, Ig	RH, SwLyca	SU, Sh	SS, SL	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
buffaloberry, silver ^{5, 11}	SHAR	5% (C)							5% (C)		5% (C)
ceanothus, snowbrush ¹¹	CEVE	5% (0.05)				5% (0.05)					
chokecherry ⁴	PRVI	5% (C)							5% (C)		5% (C)
cottonwood, narrowleaf ⁵	POAN3	20% (C)							5% (C)		5% (C)
currant, golden ^{4, 5}	RIAU	5% (0.05)									5% (C)
currant, wax ^{4, 5}	RICE	5% (C)									5% (C)
dogwood, redosier ^{4, 5}	COSES										5% (C)
greasewood ¹⁰	SAVE4				15% (0.15)				20% (0.20)		
hawthorn, black	CRDO2	5% (C)									5% (C)
juniper, Rocky Mountain ⁵	JUSC					5% (0.05)					
maple, Rocky Mountain ⁵	ACGL										5% (C)
mountain mahogany ^{4, 11}	CELE3					15% (C)					
mountain mahogany, true ¹¹	CEMO2					5% (0.25)	25% (1.25)				
rabbitbrush, green (yellow)	CHV18	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
rabbitbrush, rubber	ERNA10	5% (0.03)	5% (0.03)			5% (0.03)			5% (0.03)		
rose, Woods ⁵	ROWO	5% (0.05)				5% (0.05)					5% (0.05)
sagebrush, big (basin)	ARTRT	10% (0.05)				5% (0.03)					
sagebrush, big (mountain) ¹¹	ARTRV		5% (0.05)			5% (0.05)	5% (0.05)				
sagebrush, big (Wyoming)	ARTRW8	5% (0.05)	20% (0.20)	20% (0.20)		10% (0.10)	5% (0.05)				
sagebrush, black	ARNO4					5% (0.05)	15% (0.15)				
sagebrush, early (alkali) ⁵	ARARL			20% (0.20)		5% (0.05)					
sagebrush, low	ARARA			20% (0.20)							
sagewort, bud ⁵	PIDE4					5% (0.05)		10% (0.10)	5% (0.05)	5% (0.05)	
sagewort, cudweed ⁵	ARLU	5% (0.01)	5% (0.01)			5% (0.01)	5% (0.01)	5% (0.01)		5% (0.01)	
sagewort, fringed	ARFR4	5% (0.03)	5% (0.03)			5% (0.03)	5% (0.03)			10% (0.05)	
sagewort, green (tarragon)	ARDR4		5% (0.03)			5% (0.03)				5% (0.03)	
saltbush, fourwing dewinged	ATCA					5% (0.25)			5% (0.25)		
saltbush, fourwing winged	ATCA					5% (0.50)			5% (0.50)		
saltbush, Gardner's	ATGA		5% (0.03)		15% (0.08)	5% (0.03)	5% (0.03)	30% (0.15)	5% (0.03)	5% (0.03)	
saltbush, mat ⁸	ATCO4		5% (0.25)			5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	
saltbush, trident (basin)	ATTR3		5% (0.25)			5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	
serviceberry ⁴	AMAL2	5% (0.05)									5% (0.05)
shrubby cinquefoil ^{4, 5}	DAFRF	5% (0.05)									10% (0.10)

Table 2. MLRA 34A	PLANT SYMBOL ¹	LL, Ov, CyO	Ly, Lyc, SwLy, LySt	Cy, DC, SwCy, LyA	SLdr	Sa, Sy, CU, SwSy, SwB, Swl, Ig	RH, SwLyca	SU, Sh	SS, SL	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
silverberry ^{5, 11}	ELCO	5% (C)							5% (C)		5% (C)
snowberry, mountain	SYOR2	5% (0.15)				5% (0.15)					
snowberry, western	SYOC	5% (0.15)				5% (0.15)					
sumac, skunkbush ⁴	RHTR	5% (C)				5% (C)			5% (C)		5% (C)
willow spp. ⁴	SALIX								5% (C)		15% (C)
winterfat	KRLA2		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	20% (0.20)		10% (0.10)	

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 3. Species Percent Composition and Seed Rates for Revegetation of MLRA 34A – Zone 4 Green River & Great Divide Basin (7 - 9GR) Ecological Sites.

Table 3. MLRA 34A	PLANT SYMBOL ¹	LL, Ov	Ly, Lyc, SwLy	Sa, Sy, SwSy, SwB	Cy, SU, Sh	SwLyc	SwCy, LyA, IC	SS, SL	SLdr	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grasses		60%	60%	65%	70%	60%	70%	85%	60%	70%	60%
alkali sacaton	SPAI							5% (0.25)			
bluegrass, Canby	POCA	5% (0.05)	5% (0.05)								
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
bulrush, alkali ⁴	BOMA7							5% (0.40)			5% (0.40)
bulrush, chairmaker's ⁴	SCAM6							5% (0.40)			5% (0.40)
bulrush, hardstem ⁴	SCACA							5% (0.25)			5% (0.25)
bulrush, panicled ⁴	SCMI2										5% (0.05)
bulrush, softstem ⁴	SCTA2							5% (0.10)			5% (0.10)
cattails	TYLA										5% (0.05)
dropseed, sand	SPCR	5% (0.05)		5% (0.05)							
galleta grass	PLJA			5% (0.20)		5% (0.20)				5% (0.20)	
hairgrass, tufted	DECE							5% (0.08)			30% (0.45)
Indian ricegrass	ACHY	5% (0.30)	20% (1.20)	30% (1.80)	25% (1.50)	20% (1.20)	20% (1.20)	5% (0.30)	25% (1.50)	30% (1.80)	
inland saltgrass	DISP							20% (0.60)	5% (0.15)		
mannagrass, American	GLGR										5% (0.05)
meadow barley	HOB2							5% (1.25)			5% (1.25)
muhly, alkali ⁵	MUAS							5% (0.05)			
needleandthread ⁶	HECO26	30% (1.80)	20% (1.20)	30% (1.80)	15% (0.90)					30% (1.80)	
needlegrass, Letterman's	ACLE9	10% (0.40)		5% (0.20)	5% (0.20)						
Nuttall's alkaligrass	PUNU2							20% (0.20)			
reedgrass, bluejoint ⁵	CACA4										20% (0.10)
reedgrass, northern	CASTI3							5% (0.03)			20% (0.10)
rush, Baltic ⁴	JUARL							5% (0.01)			5% (0.01)
rush, swordleaf ⁴	JUEN							5% (0.05)			5% (0.05)
sedge, analogue ^{4, 5}	CASI2							5% (0.05)			5% (0.05)
sedge, meadow ⁴	CAPR5										5% (0.15)
sedge, Nebraska ⁴	CANE2							5% (0.25)			40% (2.0)
sedge, small-winged ^{4, 5}	CAMI7										5% (0.10)
sedge, water ^{4, 5}	CAAQ										5% (0.25)
sedge, woolly ^{4, 5}	CAPE42							5% (0.25)			5% (0.25)
sixweeks fescue	VUOC			5% (0.10)	5% (0.10)					5% (0.10)	
sloughgrass, American	BESY							5% (0.20)			5% (0.20)

Table 3. MLRA 34A	PLANT SYMBOL ¹	LL, Ov	Ly, Lyc, SwLy	Sa, Sy, SwSy, SwB	Cy, SU, Sh	SwLyc	SwCy, LyA, IC	SS, SL	SLdr	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
spikrush, beaked ^{4, 5}	ELRO2							5% (0.15)			5% (0.15)
spikrush, common ⁴	ELPA3							5% (0.10)			5% (0.10)
squirreltail, bottlebrush ⁶	ELELE	10% (0.50)	20% (1.00)	15% (0.75)	30% (1.50)	30% (1.50)	20% (1.00)	15% (0.75)	15% (0.75)	5% (0.25)	
wheatgrass, beardless	PSSPI	5% (0.35)	5% (0.35)	5% (0.35)		5% (0.35)				5% (0.35)	
wheatgrass, bluebunch	PSSP6	5% (0.35)	20% (1.40)	35% (2.45)		40% (2.80)				40% (2.80)	
wheatgrass, slender	ELTR7	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)
wheatgrass, Snake River ^{7, 8}	ELWA2	20% (1.20)	20% (1.20)	20% (1.20)	40% (2.40)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	
wheatgrass, streambank ⁷	ELLAL	20% (1.20)	20% (1.20)	20% (1.20)	40% (2.40)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)
wheatgrass, thickspike ⁷	ELLAL	20% (1.20)	20% (1.20)	20% (1.20)	40% (2.40)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)	20% (1.20)
wheatgrass, western ⁷	PASM	10% (0.60)						20% (1.20)			20% (1.20)
wildrye, basin	LECI4	25% (1.50)	5% (0.30)	5% (0.30)				30% (1.80)	15% (0.90)		20% (1.20)
wildrye, salina ⁵	LESAS		5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	
Forbs		15%	15%	10%	5%	10%	10%	10%	10%	20%	20%
aster,gray	EUGL19	5% (0.05)		5% (0.05)				5% (0.05)			5% (0.05)
beepplant, Rocky Mountain	CLSE	5% (0.60)	5% (0.60)	5% (0.60)						5% (0.60)	
beepplant, yellow ⁵	CLLU2	5% (0.50)		5% (0.50)						5% (0.50)	
blanketflower	GAAR	5% (0.35)	5% (0.35)	5% (0.35)		5% (0.35)				5% (0.35)	5% (0.35)
buckwheat, sulfur	ERUM	5% (0.20)	5% (0.20)	5% (0.20)		5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	
Colorado blue columbine	AQCO	5% (0.15)		5% (0.15)							5% (0.15)
coneflower, prairie	RACO3	5% (0.06)	5% (0.06)	5% (0.06)							5% (0.06)
daisy, fleabane (aspen) ⁵	ERSP4	5% (0.03)									5% (0.03)
elephanthead lousewort ⁵	PEGR2										5% (0.25)
evening-primrose, Hooker's	OEEL	5% (0.05)		5% (0.05)							
evening-primrose, pale	OEPA	5% (0.08)		5% (0.08)							
evening-primrose, tufted	OECA10	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)			5% (0.05)	
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)
globemallow, gooseberryleaf ⁸	SPGR2	5% (0.10)		5% (0.10)							5% (0.10)
globemallow, Munro	SPMU2	5% (0.10)		5% (0.10)							5% (0.10)
globemallow, scarlet	SPCO	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
goldenaster, hairy ⁵	HEVI4	5% (0.15)		5% (0.15)							
harebell ⁵	CARO2	5% (0.05)		5% (0.05)							5% (0.05)
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)
Indian paintbrush, lesser ⁵	CAMIM6							5% (0.03)			5% (0.03)
Indian paintbrush narrowleaf ⁵	CALI4	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)			5% (0.03)	

Table 3. MLRA 34A	PLANT SYMBOL ¹	LL, Ov	Ly, Lyc, SwLy	Sa, Sy, SwSy, SwB	Cy, SU, Sh	SwLyc	SwCy, LyA, IC	SS, SL	SLdr	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
iris, Rocky Mountain	IRMI							5% (1.00)			5% (1.00)
lupine, silky ^{10, 11}	LUSE4	5% (1.75)		5% (1.75)							5% (1.75)
lupine, silvery ^{10, 11}	LUAR3	5% (0.35)		5% (0.35)							5% (0.35)
milkvetch, Canada ^{10, 11}	ASCA11										5% (0.15)
monkeyflower, seep ⁵	MIGU							5% (0.03)			5% (0.03)
penstemon, firecracker	PEEA	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)				5% (0.10)	
penstemon, fuzzytongue ⁵	PEER	5% (0.15)	5% (0.15)	5% (0.15)							5% (0.15)
penstemon, Great Basin ⁵	PESU2	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)	
penstemon, little-flowered	PEPR2	5% (0.03)									5% (0.03)
penstemon, narrowleaf ⁵	PEAN4	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)			5% (0.15)	
penstemon, Palmer ⁸	PEPA8	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	
penstemon, Rocky Mountain	PEST	5% (0.08)	5% (0.08)	5% (0.08)							
penstemon, thicketleaf ⁵	PEPA6	5% (0.20)	5% (0.20)	5% (0.20)		5% (0.20)	5% (0.20)			5% (0.20)	
penstemon, Venus ⁸	PEVE2	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)			5% (0.05)	
phacelia, silverleaf ⁵	PHHA	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)
sunflower, annual	HEAN3	5% (0.90)						5% (0.90)			5% (0.90)
sweetvetch, northern ¹¹	HEBO	5% (0.90)									5% (0.90)
tansyaster, hoary	MACA2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)
western yarrow ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)			5% (0.03)	5% (0.03)
Shrubs/Trees		25%	25%	25%	25%	30%	20%	5%	30%	10%	20%
buffaloberry, silver ^{5, 11}	SHAR	10% (C)						5% (C)			5% (C)
cottonwood, narrowleaf ⁵	POAN3	20% (C)									5% (C)
currant, golden ^{4, 5}	RIAU	5% (C)									5% (C)
currant, wax ^{4, 5}	RICE	5% (C)									5% (C)
dogwood, redosier ^{4, 5}	COSES										5% (C)
greasewood ¹⁰	SAVE4							20% (0.20)	15% (0.15)		
hawthorn, black	CRDO2	5% (C)									5% (C)
juniper, Utah ⁵	JUOS			5% (C)							
rabbitbrush, green (yellow)	CHVI8	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
rabbitbrush, rubber	ERNA10	5% (0.03)		5% (0.03)				5% (0.03)			
rose, Wood's ⁵	ROWO	5% (0.05)		5% (0.05)							5% (0.05)
sagebrush, big (basin)	ARTRT	5% (0.03)		5% (0.03)							
sagebrush, big (Wyoming)	ARTRW8		20% (0.20)	20% (0.20)	20% (0.20)		20% (0.20)				
sagebrush, birdfoot ⁵	ARPE6						20% (0.10)				

Table 3. MLRA 34A	PLANT SYMBOL ¹	LL, Ov	Ly, Lyc, SwLy	Sa, Sy, SwSy, SwB	Cy, SU, Sh	SwLyc	SwCy, LyA, IC	SS, SL	SLdr	Li, Gr, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
sagebrush, black	ARNO4			5% (0.05)		15% (0.15)	5% (0.05)				
sagebrush, early (alkali) ⁵	ARARL						20% (0.20)				
sagewort, bud ⁵	PIDE4				15% (0.15)	5% (0.05)	5% (0.05)			5% (0.05)	
sagewort, cudweed ⁵	ARLU	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	5% (0.01)	
sagewort, fringed	ARFR4	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)				5% (0.03)	
saltbush, fourwing dewinged	ATCA2		5% (0.25)	5% (0.25)							
saltbush, fourwing winged	ATCA2		5% (0.50)	5% (0.50)							
saltbush, Gardner's	ATGA		5% (0.03)		20% (0.10)	5% (0.03)	5% (0.03)			5% (0.03)	
saltbush, mat ⁸	ATCO4		5% (0.25)		5% (0.25)	5% (0.25)	5% (0.25)			5% (0.25)	
saltbush, trident (basin)	ATTR3		5% (0.25)		5% (0.25)	5% (0.25)	5% (0.25)			5% (0.25)	
shadscale	ATCO		5% (0.25)	5% (0.25)						5% (0.25)	
spiny hopsage	GRSP			15% (0.30)							
sumac, skunkbush ⁴	RHTR	5% (C)									5% (C)
willow spp. ⁴	SALIX										15% (C)
winterfat	KRLA2		5% (0.05)	5% (0.05)	5% (0.05)	15% (0.15)	10% (0.10)			10% (0.10)	

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 4. Species Percent Composition and Seed Rates for Revegetation of MLRA 32 – Zone 5 Big Horn Basin & Zone 8 Wind River Basin (5 - 9 WR) Ecological Sites.

Table 4. MLRA 32	PLANT SYMBOL ¹	Cy, SwCy, IC	Sa, Sy, SwSy	Ly, SwLy	SL, SS	CU, Gr	LL	SLdr	SU, SaB, Sh	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		70%	70%	75%	70%	70%	60%	70%	50%	65%	80%
bluegrass, big	POAM				5% (0.10)		5% (0.10)				
bluegrass, sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)			5% (0.10)		
bluestem, little	SCSC									5% (0.20)	
canarygrass, reed	PHAR3										5% (0.20)
cordgrass, alkali	SPGR				5% (0.25)						5% (0.25)
dropseed, sand	SPCR		10% (0.10)						5% (0.05)	5% (0.05)	
grama, blue	BOGR2	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	
hairgrass, tufted	DECE				5% (0.08)					5% (0.08)	15% (0.23)
Indian ricegrass	ACHY	10% (0.60)	20% (1.20)		5% (0.30)	10% (0.60)	5% (0.30)	10% (0.60)	25% (1.50)	20% (1.20)	
mannagrass, tall	GLST										5% (0.05)
muhly, mat	MURI				5% (0.05)			5% (0.05)			
needleandthread grass	HECO26		40% (2.40)	15% (0.90)		20% (1.20)	5% (0.30)		25% (1.50)	20% (1.20)	
needlegrass, green	NAVI4	5% (0.30)									
Nuttall's alkaligrass	PUNU2				25% (0.25)						
prairie Junegrass	KOMA	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)					
reedgrass, bluejoint	CALAM										5% (0.02)
reedgrass, northern	CASTI3										5% (0.02)
rush, baltic	JUARL				5% (0.02)						5% (0.02)
sacaton, alkali	SPAI				25% (0.25)			15% (0.15)	5% (0.05)		
saltgrass, inland	DISP				5% (0.08)			20% (0.30)			
sandreed, prairie	CALO		30% (1.20)				5% (0.20)		5% (0.20)		
sedge, beaked	CARO6										25% (1.25)
sedge, Nebraska	CANE2										35% (1.75)
sedge, water ^{4, 5}	CAAQ										25% (1.25)
sloughgrass, American	BESY										5% (.25)
squirreltail, bottlebrush ⁶	ELELE	25% (1.25)		10% (0.50)	10% (0.50)	5% (0.25)	10% (0.50)	15% (0.75)	25% (1.25)	5% (0.25)	
threeawn, Fendler's ⁵	ARPUF		5% (0.20)	5% (0.20)					5% (0.20)	5% (0.20)	
threeawn, red	ARPUL		5% (0.20)			5% (0.20)					
wheatgrass, bluebunch	PSSP6	5% (0.35)		10% (0.70)		50% (3.50)			5% (0.35)	30% (2.10)	
wheatgrass, Montana ⁵	ELAL7	5% (0.30)		10% (0.60)		50% (3.00)			5% (0.30)	30% (1.80)	
wheatgrass, slender	ELTR7						15% (0.90)				
wheatgrass, thickspike ⁷	ELLAL			40% (2.40)							

Table 4. MLRA 32	PLANT SYMBOL ¹	Cy, SwCy, IC	Sa, Sy, SwSy	Ly, SwLy	SL, SS	CU, Gr	LL	SLdr	SU, SaB, Sh	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
wheatgrass, western ⁷	PASM	45% (2.70)	10% (0.60)	40% (2.40)	15% (0.90)	20% (1.20)	15% (0.90)	15% (0.90)	15% (0.90)	15% (0.90)	
wildrye, basin	LECI4				25% (1.50)		35% (2.10)	10% (0.60)			
wildrye, Canada	ELCA4				5% (0.30)		5% (0.30)	5% (0.30)			
Forbs		10%	15%	10%	10%	15%	10%	10%	15%	15%	10%
aster, western ⁵	SYAS3	5% (0.05)				5% (0.05)		5% (0.05)	5% (0.05)		
biscuitroot, bigseed ⁵	LOMA3		5% (0.75)	5% (0.75)							
biscuitroot, cous ⁵	LOCO4	5% (0.40)							5% (0.40)		
buckwheat, parsnipflower	ERHE2	5% (0.20)	5% (0.20)	5% (0.20)							
buckwheat, sulfur-flower	ERUM		5% (0.20)	5% (0.20)		5% (0.20)			5% (0.20)	5% (0.20)	
buttercup, sagebrush ⁵	RAGL	5% (1.25)	5% (1.25)	5% (1.25)							
cinquefoil, silverweed ⁵	ARAN7				5% (0.05)		5% (0.05)				5% (0.05)
daisy, cutleaf ⁵	ERCO4		5% (0.15)			5% (0.15)				5% (0.15)	
dustymaiden, Douglas ¹	CHDO								5% (0.18)		
evening-primrose, tufted	OECA10									5% (0.05)	
fleabane, Englemann's ⁵	EREN		5% (0.10)								
globemallow, scarlet	SPCO	5% (0.10)		5% (0.10)		5% (0.10)			5% (0.10)	5% (0.10)	
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)		5% (0.05)							
horsetail, smooth ⁴	EQLA				5% (C)						5% (C)
iris, Rocky Mountain	IRMI										5% (1.00)
licorice, American ⁵	GLLE3				5% (0.75)						
lupine, Wyeth's ^{5, 10, 11}	LUWY								5% (3.00)		
milkvetch, woolypod ^{5, 10}	ASPU9		5% (0.30)	5% (0.30)		5% (0.30)			5% (0.30)	5% (0.30)	
mint, common ⁵	MEAR4		5% (0.01)								5% (0.01)
mule-ears ⁵	WYETH					5% (1.95)				5% (1.95)	
Indian paintbrush, wavyleaf ⁵	CAAP4		5% (0.15)	5% (0.15)					5% (0.15)	5% (0.15)	
Indian paintbrush narrowleaf ⁵	CALI4		5% (0.03)	5% (0.03)					5% (0.03)	5% (0.03)	
penstemon, fuzzytongue ⁵	PEER		5% (0.15)			5% (0.15)					
vetch, American ⁵	VIAM	5% (1.0)									
yarrow, western ⁹	ACMI2		5% (0.03)			5% (0.03)				5% (0.03)	
Shrubs/Trees		20%	15%	15%	20%	15%	30%	20%	35%	20%	10%
buffaloberry, silver ^{5, 11}	SHAR				5% (C)		5%(C)				
cottonwood, narrowleaf ⁴	POAN3				5% (C)		20% (C)				
currant, golden ^{4, 5}	RIAU						5% (C)				

Table 4. MLRA 32	PLANT SYMBOL ¹	Cy, SwCy, IC	Sa, Sy, SwSy	Ly, SwLy	SL, SS	CU, Gr	LL	SLdr	SU, SaB, Sh	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
greasewood ¹⁰	SAVE4	5% (0.05)			20% (0.20)		5% (0.05)	15% (0.15)	5% (0.05)		
juniper, Utah ⁵	JUOS					20% (C)				20% (C)	
rabbitbrush, green	CHVI8	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)	
rabbitbrush, rubber	ERNA10	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
rose, Woods ⁵	ROWO				5% (0.05)		5% (0.05)				5% (0.03)
sagebrush, big (basin)	ARTRT				5% (0.03)		5% (0.03)	5% (0.03)			
sagebrush, birdfoot ⁵	ARPE6	5% (0.03)		5% (0.03)					5% (0.03)		
sagebrush, bud ⁵	PIDE4										
sagebrush, plains silver	ARCAC		5% (0.05)				5% (0.05)		5% (0.05)		
sagebrush, big (Wyoming)	ARTRW8	15% (0.15)	10% (0.10)	15% (0.15)		10% (0.10)			5% (0.05)	5% (0.05)	
sagewort, fringed	ARFR4		5% (0.03)	5% (0.03)		5% (0.03)				5% (0.03)	
saltbush, fourwing (winged)	ATCA2		5% (0.50)								
saltbush, Gardner's	ATGA2	5% (0.03)						5% (0.03)	40% (0.24)		
shadscale	ATCO	5% (0.25)	5% (0.25)	5% (0.25)		5% (0.25)					
snowberry, western	SYOC						5% (0.15)				
sumac, skunkbush ⁴	RHTR		5% (C)			5% (C)			15% (C)	5% (C)	
willow, coyote ⁴	SAEX										5% (C)
winterfat	KRLA2	10% (0.10)	5% (0.05)	5% (0.05)					5% (0.05)	5% (0.05)	
yucca, soapweed	YUGL		5% (0.05)						5% (0.05)	5% (0.05)	

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 5. Species Percent Composition and Seed Rates for Revegetation of MLRA 43B – Zone 6 Foothills and Mountains East (15 - 19 E) Ecological Sites.

Table 5. MLRA 43B	PLANT SYMBOL ¹	Cy, SwCy	CU	Ig, SwIg	Ly, SwLy	Sy, SwSy	Ov	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)								
Grass		75%	70%	75%	75%	70%	75%	70%	70%	70%
barley, meadow	HOB2							5% (1.25)		
bluegrass, big	POAM		5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		
bluegrass, Canby	POCA	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			
bluegrass, mutton	POFE		5% (0.10)		5% (0.10)					
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
brome, mountain	BRMA4	5% (0.50)	5% (0.50)		5% (0.50)	15% (1.50)	10% (1.00)			
fescue, Idaho	FEID	20% (0.60)	25% (0.75)	25% (0.75)	25% (0.75)	10% (0.30)	10% (0.30)	5% (0.15)	10% (0.30)	
fescue, spike	LEK12	10% (0.40)	20% (0.80)	15% (0.60)	25% (1.00)	5% (0.20)			10% (0.40)	
hairgrass, tufted	DECE							20% (0.30)		25% (0.40)
Indian ricegrass	ACHY	5% (0.30)	5% (0.30)		5% (0.30)	5% (0.30)			5% (0.30)	
mannagrass, fowl	GLST									5% (0.35)
muhly, mat ⁵	MURI							5% (0.05)		
muhly, mountain ⁵	MUMO	5% (0.03)	5% (0.03)	10% (0.06)					10% (0.06)	
needleandthread ⁶	HECO26				5% (0.30)	5% (0.30)			5% (0.30)	
needlegrass, Columbia	ACNE9	15% (0.75)	25% (1.25)	25% (1.25)	25% (1.25)	50% (2.50)	15% (0.75)		25% (1.25)	
needlegrass, Letterman's ⁵	ACLE9	5% (0.30)		5% (0.30)	5% (0.30)	10% (0.60)				
oatgrass, California ⁵	DACA3			5% (0.15)	5% (0.50)					
oatgrass, onespike ⁵	DAUN		5% (0.10)	5% (0.10)	5% (0.10)				5% (0.10)	
prairie Junegrass	KOMA		10% (0.10)	5% (0.05)	10% (0.10)	10% (0.10)	5% (0.05)		10% (0.10)	
reedgrass, northern	CAST13							10% (0.06)		25% (0.15)
reedgrass, bluejoint ⁵	CACA4									
rush, Baltic ⁴	JUARL							5% (0.01)		5% (0.01)
sedge, dunhead ^{4, 5}	CAPH2									5% (0.15)
sedge, Nebraska ⁴	CANE2							25% (1.25)		25% (1.30)
sedge, inland ^{4, 5}	CAIN11							5% (0.25)		
sedge, slough ⁴	CAOB3									10% (0.30)
sedge, water ^{4, 5}	CAAQ									10% (0.40)
spike trisetum ⁵	TRSP2	5% (0.05)	5% (0.05)		5% (0.05)				5% (0.05)	
squirreltail, bottlebrush ⁶	ELEL5	5% (0.25)					5% (0.25)			
timothy, alpine	PHAL2							10% (0.20)		
wheatgrass, bluebunch	PSSP6	15% (1.05)	10% (0.70)	15% (1.05)	20% (1.40)	5% (0.35)			25% (1.75)	
wheatgrass, Montana ⁵	ELAL7	5% (0.30)	10% (0.60)		5% (0.30)				25% (1.50)	
wheatgrass, slender	ELTR7	5% (0.30)	5% (0.30)		5% (0.30)	5% (0.30)	20% (0.20)		5% (0.30)	

Table 5. MLRA 43B	PLANT SYMBOL ¹	Cy, SwCy	CU	Ig, SwIg	Ly, SwLy	Sy, SwSy	Ov	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)								
wheatgrass, thickspike ⁷	ELLA3				5% (0.30)	10% (0.60)				
wheatgrass, western ⁷	PASM	15% (0.90)	10% (0.60)	10% (0.60)	10% (0.60)		10% (0.70)	10% (0.60)	10% (0.60)	
wildrye, basin	LECI4						25% (1.50)	15% (0.90)		
Forbs		10%	10%	15%	15%	20%	15%	15%	15%	15%
arnica, heartfleaf ⁵	ARCO9			5% (0.20)						
dandelion, mountain ⁵	AGGL			5% (0.08)	5% (0.08)		5% (0.08)			5% (0.08)
balsamroot, arrowleaf	BASA3		5% (0.75)	5% (0.75)	5% (0.75)				5% (0.75)	
bergamot, wild	MOFI				5% (0.05)					
biscuitroot, cous ⁵	LOCO4	5% (0.40)								
bistort, American ⁵	POBI6							5% (0.35)		5% (0.35)
bluebells, mountain	MECI3							5% (0.20)		5% (0.20)
buckwheat, parsnipflower	ERHE2					5% (0.20)				
buckwheat, sulfur-flower	ERUM	5% (0.20)				5% (0.20)				
buttercup, sagebrush ⁵	RAGL						5% (1.25)	5% (1.25)		
cowparsnip ⁵	HEMA80							5% (0.75)		
flax, prairie (Lewis)	LILE3				5% (0.15)			5% (0.15)		
daisy, fleabane (aspen) ⁵	ERSP4	5% (0.03)		5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)		
elephanthead lousewort ⁵	PEGR2						5% (0.25)			5% (0.25)
geranium, sticky	GEVI2						5% (0.75)	5% (0.75)		5% (0.75)
goldenbanner, mountain ^{5, 10}	THMO6							5% (2.0)		
goldenrod, Canada ⁵	SOCA6						5% (0.03)			
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			5% (0.05)	
horsetail, field ⁴	EQAR							5% (C)		5% (C)
Indian paintbrush narrowleaf ⁵	CALI4	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			
Indian paintbrush, splitleaf ⁵	CARH4	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			
Indian paintbrush, sulphur ⁵	CASU12	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			
iris, Rocky Mountain	IRMI									
licorice, American ⁵	GLLE3						5% (0.75)	5% (0.75)		
lupine, silky ^{10, 11}	LUSE4	5% (1.75)	5% (1.75)	5% (1.75)	5% (1.75)	5% (1.75)	5% (1.75)			
lupine, silvery ^{10, 11}	LUAR3	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)			
marigold, marsh	CALE4									5% (0.10)
milkvetch, woolypod ^{5, 10}	ASPU9	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)			5% (0.30)		
mint, common ⁵	MEAR4									5% (0.01)
mule-ears ⁵	WYETH	5% (1.95)			5% (1.95)					

Table 5. MLRA 43B	PLANT SYMBOL ¹	Cy, SwCy	CU	Ig, SwIg	Ly, SwLy	Sy, SwSy	Ov	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)								
penstemon, firecracker	PEEA	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)			
penstemon, fuzzytongue ⁵	PEER	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)			
penstemon, little-flowered	PEPR2	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)			
penstemon, Palmer ⁸	PEPA8	5% (0.08)	5% (0.08)		5% (0.08)	5% (0.08)	5% (0.08)			
penstemon, Rocky Mtn	PEST2	5% (0.08)	5% (0.08)		5% (0.08)	5% (0.08)	5% (0.08)			
penstemon, Rydberg's ⁵	PERY	5% (0.35)	5% (0.35)		5% (0.35)	5% (0.35)	5% (0.35)			
phacelia, silverleaf ⁵	PHHA				5% (0.10)		5% (0.10)			
ragwort, lambstongue ⁵	SEIN2	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)		5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)
sneezeweed, common ⁵	HEAU	5% (0.05)			5% (0.05)					
sunflower, common woolly ⁵	ERLA6		5% (0.05)		5% (0.05)					
sunflower, Nuttall's ⁵	HENU		5% (0.50)		5% (0.50)					
sunflower, oneflowered false ⁵	HEUN		5% (1.30)		5% (1.30)					
vetch, American ⁵	VIAM			5% (1.60)	5% (1.60)				5% (1.60)	
violet, hookespur	VIAD							5% (0.05)		
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
Shrubs/Trees		15%	20%	10%	10%	10%	10%	15%	15%	15%
alder, thinleaf ^{4, 11}	ALIN2							5% (C)		
birch, bog ^{4, 5}	BEP4									5% (C)
birch, water ^{4, 5}	BECOC2						5% (C)	5% (C)		
bitterbrush, antelope ^{10, 11}	PUTR2		10% (0.20)	10% (0.20)	5% (0.10)	5% (0.10)			25% (0.50)	
boxelder ⁴	ACNE2							5% (C)		
buffaloberry, silver ^{5, 11}	SHAR						5% (C)			
ceanothus, snowbrush ¹¹	CEVE						5% (0.05)			
chokecherry ⁴	PRVI						10% (C)	5% (C)		
current spp.	RIBES						5% (C)	5% (C)		5% (C)
dogwood, redosier ^{4, 5}	COSE16							5% (C)		5% (C)
juniper, Rocky Mountain ⁵	JUSC2		5% (C)	5% (C)		5% (C)			5% (C)	
laurel, alpine ⁵	KAMI									5% (C)
mountain mahogany spp.	CERCO				5% (C)	5% (C)			25% (C)	
pine, limber ⁵	PIFL2					5% (C)			5% (C)	
rabbitbrush, green	CHVI8	5% (0.03)								
rabbitbrush, rubber	ERNA10		5% (0.03)		5% (0.03)					
rose, Woods ⁵	ROWO						5% (0.05)	5% (0.05)		
sagebrush, black	ARNO4	5% (0.05)	5% (0.05)	10% (0.10)	5% (0.05)				25% (0.25)	

Table 5. MLRA 43B	PLANT SYMBOL ¹	Cy, SwCy	CU	Ig, SwIg	Ly, SwLy	Sy, SwSy	Ov	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)								
sagebrush, silver	ARCA13						5% (0.05)			
sagebrush, threetip ⁵	ARTR4			5% (.03)						
sagebrush, big (Wyoming)	ARTRW8	10% (0.10)	5% (0.05)		10% (0.10)	10% (0.10)			5% (0.05)	
sagewort, fringed	ARFR4					5% (0.03)				
serviceberry ⁴	AMAL2				5% (C)		10% (C)			
shrubby cinquefoil ^{4,5}	DAFRF							5% (0.05)		
snowberry, western	SYOC						5% (0.15)			
willow spp. ⁴	SALIX						5% (C)	10% (C)		10% (C)

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 6. Species Percent Composition and Seed Rates for Revegetation of MLRA 32 – Zone 7 Foothills and Basins East (10 - 14 E) Ecological Sites.

Table 6. MLRA 32	PLANT SYMBOL ¹	Cy, SwCy, CyO	Ly, SwLy, CU	Sy, SwSy	LL, Ov	SL, SLdr	SS	SU, Sh	Sb	VS, Gr	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		75%	75%	75%	60%	75%	80%	50%	70%	75%	75%
alkali sacaton	SPAI					25% (0.25)	40% (0.40)	5% (0.05)			
bluegrass, big	POAM				5% (0.10)				5% (0.10)		
bluegrass, Canby	POCA	10% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)					5% (0.05)	
bluegrass, mutton	POFE	10% (0.20)							5% (0.05)		
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)		5% (0.10)	
bulrush, chairmaker's ⁴	SCAM6						5% (0.40)				
cordgrass, alkali	SPGR						10% (0.50)				
dropseed, sand	SPCR			5% (0.05)						5% (0.05)	
fescue, spike	LEKI2	5% (0.20)	10% (0.40)	5% (0.15)							
grama, blue	BOGR2	5%(0.15)	5%(0.15)	5%(0.15)		5%(0.15)		5%(0.15)		5%(0.15)	
hairgrass, tufted	DECE						5% (0.08)		5% (0.08)		30% (0.45)
Indian ricegrass	ACHY	25% (1.50)	25% (1.50)	20% (1.20)	5% (0.30)	5% (0.30)		25% (1.50)		20% (1.20)	
inland saltgrass	DISP					20% (0.30)	5% (0.80)				
muhly, mat ⁵	MURI						5% (0.05)				
needleandthread ⁶	HECO26	5% (0.30)	10% (0.60)	30% (1.80)	20% (1.20)			10% (0.60)		15% (0.90)	
needlegrass, green	NAVI4	30% (1.80)	10% (0.60)		30% (1.80)						
reedgrass, bluejoint ⁵	CACAM								5% (0.02)		5% (0.02)
Nuttall's alkaligrass	PUNU2						30% (0.30)				
prairie Junegrass	KOMA	5% (0.05)	5% (0.05)	10% (0.10)	5% (0.05)					10% (0.10)	
prairie sandreed	CALO			10% (0.40)	5% (0.20)						
rush, Baltic ⁴	JUARL						5% (0.02)				5% (0.02)
sedge, golden ⁵	CAAU3										5% (0.10)
sedge, inland ^{4, 5}	CAIN11								5% (0.25)		5% (0.25)
sedge, Nebraska ⁴	CANE2										30% (1.50)
sedge, slough ⁴	CAOB3										25% (1.25)
sedge, water ^{4, 5}	CAAQ										5% (0.25)
squirreltail, bottlebrush ⁶	ELEL5	10% (0.50)	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)		15% (0.75)		5% (0.25)	
threeawn, fendler	ARPUF									5% (0.20)	
theeawn, red	ARPUL									5% (0.20)	
wheatgrass, bluebunch	PSSP6	20% (1.40)	50% (3.50)	20% (1.40)				10% (0.70)		40% (2.80)	
wheatgrass, Montana ⁵	ELAL7	20% (1.20)	50% (3.00)	20% (1.20)				10% (0.60)		45% (3.15)	
wheatgrass, slender	ELTR7	5% (0.30)			15% (0.90)				25% (1.50)	45% (2.70)	

Table 6. MLRA 32	PLANT SYMBOL ¹	Cy, SwCy, CyO	Ly, SwLy, CU	Sy, SwSy	LL, Ov	SL, SLdr	SS	SU, Sh	Sb	VS, Gr	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
wheatgrass, streambank ⁷	ELLA3								5% (0.30)		
wheatgrass, thickspike ⁷	ELLAL		15% (0.90)	10% (0.60)					5% (0.30)		
wheatgrass, western ⁷	PASM	35% (2.10)	15% (0.90)	10% (0.60)	15% (0.90)	15% (0.90)	5% (0.30)	20% (1.20)	5% (0.30)	10% (0.60)	
wildrye, basin	LECI4	15% (0.90)	5% (0.30)		30% (1.80)	35% (2.10)	15% (0.90)		50% (3.00)		
wildrye, canada	ELCA4				5% (0.30)	10% (0.60)					
Forbs		10%	10%	15%	15%	10%	5%	10%	10%	10%	5%
biscuitroot, bigseed ⁵	LOMA3	5% (0.75)	5% (0.75)		5% (0.75)						
bisuitroot, cous	LOCO4	5% (0.40)						5% (0.40)			
bistort, American ⁵	POBI6								5% (0.35)		
buckwheat, parsnipflower	ERHE2	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)						
buckwheat, sulfur-flower	ERUM	5% (0.20)	5% (0.20)	5% (0.20)				5% (0.20)		5% (0.20)	
buttercup, sagebrush ⁵	RAGL										5% (1.25)
cinquefoil, silverweed ⁵	ARAN7			5% (0.05)	5% (0.05)	5% (0.05)			5% (0.05)		5% (0.05)
cowparsnip ⁵	HEMA80								5% (0.75)		
daisy, cutleaf ⁵	ERCO4									5% (0.15)	
evening primrose, tufted	OECA10							5% (0.05)		5% (0.05)	
globemallow, scarlet	SPCO	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)					5% (0.10)	
groundsel, woolly ⁵	PACA15									5% (0.08)	
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)	5% (0.05)		5% (0.05)						
iris, Rocky Mountain	IRMI								5% (1.00)		5% (1.00)
licorice, American ⁵	GLLE3								5% (0.75)		
lupine, silky ^{10, 11}	LUSE4	5% (1.75)			5% (1.75)						
lupine, silvery ^{10, 11}	LUAR3	5% (0.35)			5% (0.35)						
milkvetch, woolypod ^{5, 10}	ASPU9			5% (0.30)							
mint, common ⁵	MEAR4								5% (0.01)		5% (0.01)
Indian paintbrush, wavyleaf ⁵	CAAP4	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)					5% (0.15)	
penstemon, fuzzytongue ⁵	PEER									5% (0.15)	
vetch, American ⁵	VIAM	5% (1.60)									
yarrow, western ⁹	ACMIO		5% (0.03)						5% (0.03)		
Shrubs/Trees		15%	15%	10%	25%	15%	15%	40%	20%	15%	20%
birch, water ^{4, 5}	BEOC2								5% (C)		5% (C)
bitterbrush, antelope ^{10, 11}	PUTR2		5% (0.10)	5% (0.10)						5% (0.10)	
boxelder ⁴	ACNE2				5% (C)				5% (C)		
buffaloberry, silver ^{5, 11}	SHAR				5% (C)		5% (C)				
cottonwood, narrowleaf ⁴	POAN3				10% (C)				5% (C)		

Table 6. MLRA 32	PLANT SYMBOL ¹	Cy, SwCy, CyO	Ly, SwLy, CU	Sy, SwSy	LL, Ov	SL, SLdr	SS	SU, Sh	Sb	VS, Gr	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
currant, golden ^{4, 5}	RIAU				5% (C)						
dogwood, redosier ^{4, 5}	COSE16										5% (C)
greasewood ¹⁰	SAVE	5% (.05)				45% (0.45)	5% (0.05)				
juniper, Rocky Mountain ⁵	JUSC2				5% (C)					5% (C)	
juniper, Utah ⁵	JUOS		5% (C)					5% (C)		5% (C)	
mountain mahogany curlleaf ⁴	CELE3									10% (C)	
pine, limber ⁵	PIFL2								5% (C)		
rabbitbrush, rubber	ERNA10	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	5% (0.03)	
rabbitbrush, green	CHVI8	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)				5% (0.03)	
rose, Woods ⁵	ROWO				5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)		5% (0.05)
sagebrush, big (basin)	ARTRT				5% (0.03)	5% (0.03)					
sagebrush, black	ARNO4	5% (0.05)	5% (0.05)	5% (0.05)				5% (0.05)		15% (0.15)	
sagebrush, birdfoot ⁵	ARPE6	5% (0.03)						5% (0.03)			
sagebrush, bud ⁵	PIDE4	5% (0.05)						5% (0.05)			
sagebrush, silver	ARCA13	5% (0.05)		5% (0.05)	5% (0.05)						
sagebrush, big (Wyoming)	ARTRW8	5% (0.05)	15% (0.15)	10% (0.10)	5% (0.05)			5% (0.05)		5% (0.05)	
sagewort, fringed	ARFR4	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)					5% (0.03)	
saltbush, Gardner's	ATGA	5% (0.03)				45% (0.27)		10% (0.06)			
shadscale	ATCO	5% (0.25)						5% (0.25)		5% (0.25)	
shrubby cinquefoil ^{4,5}	DAFRF								15% (0.15)		
snowberry, western	SYOC				5% (0.15)				5% (0.15)		
sumac, skunkbush ⁴	RHTR			5% (C)				5% (C)		5% (C)	
willow spp. ⁴	SALIX				20% (C)				20% (C)		20% (C)
winterfat	KRLA2	5% (0.05)	5% (0.05)	5% (0.05)				5% (0.05)		5% (0.05)	
yucca, soapweed	YUGL			5% (0.05)							

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 7. Species Percent Composition and Seed Rates for Revegetation of MLRA 34A – Zone 9 High Plains Southeast (10 - 14 SE) Ecological Sites.

Table 7. MLRA 34A	PLANT SYMBOL ¹	Cy, DC, SwCy	LL, CyO, Ly, LyO, SwLy, Sly	IC	SnLy	Sa, Sy, SwSy	SS, SL	SU, Sh	CU, Gr, VS	SwB, RH	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		75%	70%	50%	60%	75%	75%	40%	80%	50%	80%
alkali sacaton	SPAI						55% (0.55)	5% (0.05)			5% (0.05)
bentgrass, rough	AGSC5										5% (0.03)
bluegrass, big	POAM	5% (0.10)	5% (0.10)	10% (0.20)	5% (0.10)	5% (0.10)	5% (0.20)	5% (0.10)		5% (0.10)	
bluegrass, Canby's	POSE	5% (0.05)	20% (0.20)			5% (0.05)					
bluegrass, mutton	POFE	20% (0.20)	5% (0.05)		5% (0.05)	5% (0.05)		5% (0.05)			
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
bluestem, little	SCSC									5% (0.20)	
bulrush, alkali ⁴	BOMA7						5% (0.40)				5% (0.40)
bulrush, chairmaker's ⁴	SCAM6						5% (0.40)				5% (0.40)
bulrush, hardstem ⁴	SCACA						5% (0.25)				5% (0.25)
bulrush, softstem ⁴	SCTA2						5% (0.10)				5% (0.10)
cattails	TYLA										5% (0.05)
grama, blue	BOGR2		5 (0.10)		5 (0.10)	5 (0.10)				5% (0.10)	
hairgrass, tufted	DECE						5% (0.08)				30% (0.45)
Indian ricegrass	ACHY	20% (1.20)	10% (0.60)	15% (0.90)	5% (0.30)	15% (0.90)	5% (0.30)	20% (1.20)	30% (1.80)	5% (0.30)	
inland saltgrass	DISP						10% (0.30)				
mannagrass, American	GLGR										10% (0.10)
meadow barley	HOB2						5% (1.25)				5% (1.25)
muhly, alkali ⁵	MUAS		5% (0.05)				5% (0.05)				
needleandthread ⁶	HECO26		15% (0.60)		10% (0.60)	35% (2.10)			20% (1.20)	10% (0.60)	
needlegrass, green	NAVI4		10% (0.60)							5% (0.30)	
needlegrass, Letterman's ⁵	ACLE9		15% (0.60)			15% (0.60)				5% (0.20)	
Nuttall's alkaligrass	PUNU2						10% (0.10)				
prairie junegrass	KOMA	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)				5% (0.05)	
prairie sandreed	CALO					5% (0.20)					
reedgrass, bluejoint ⁵	CACAM										10% (0.05)
reedgrass, northern	CAST13						5% (0.03)				10% (0.05)
rush, Baltic ⁴	JUARL						20% (0.05)				5% (0.01)
sedge, meadow ⁴	CAPR5										5% (0.15)
sedge, Nebraska ⁴	CANE2						5% (0.25)				30% (1.50)
sedge, small-winged ^{4, 5}	CAMI7										5% (0.10)
sedge, water ^{4, 5}	CAAQ										5% (0.25)

Table 7. MLRA 34A	PLANT SYMBOL ¹	Cy, DC, SwCy	LL, CyO, Ly, LyO, SwLy, Sly	IC	SnLy	Sa, Sy, SwSy	SS, SL	SU, Sh	CU, Gr, VS	SwB, RH	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
sedge, woolly ^{4,5}	CAPE42						5% (0.25)				5% (0.25)
sloughgrass, American	BESY						5% (0.20)				5% (0.20)
spikerush, beaked ^{4,5}	ELRO2						5% (0.15)				5% (0.15)
spikerush, common ⁴	ELPA3						5% (0.10)				5% (0.10)
squirreltail, bottlebrush ⁶	ELEL5	30% (1.50)	5% (0.25)	15% (0.75)		10% (0.50)		20% (1.00)	20% (1.00)	10% (0.50)	
wheatgrass, beardless	PSSPI		5% (0.35)						5% (0.35)		
wheatgrass, bluebunch	PSSP6		15% (1.05)		10% (0.7)	20% (1.40)			50% (3.50)	30% (2.10)	
wheatgrass, slender	ELTR7		20% (1.20)			20% (1.20)	20% (1.20)				20% (1.20)
wheatgrass, Snake River ^{7,8}	ELWA2		5% (0.30)					10% (0.60)	20% (1.20)	20% (1.20)	
wheatgrass, streambank ⁷	ELLAL	20% (1.20)	20% (1.20)			20% (1.20)		10% (0.60)	20% (1.20)		
wheatgrass, thickspike ⁷	ELLAL	20% (1.20)	20% (1.20)			20% (1.20)		10% (0.60)	20% (1.20)	10% (0.60)	
wheatgrass, western ⁷	PASM		35% (2.10)	35% (2.10)	10% (0.60)	5% (0.30)	20% (1.20)	20% (1.20)		10% (0.60)	20% (1.20)
wildrye, basin	LECI4	5% (0.30)	15% (0.90)				20% (1.20)				40% (2.40)
wildrye, Canada	ELCA4		5% (0.30)								5% (0.30)
Forbs		10%	10%	5%	10%	10%	10%	5%	10%	10%	10%
aster,gray	EUGL19		5% (0.05)			5% (0.05)					5% (0.05)
beeplant, Rocky Mtn	CLSE		5% (0.60)			5% (0.60)			5% (0.60)	5% (0.60)	
black-eyed Susan	RUHI2										5% (0.03)
blanketflower	GAAR	5% (0.35)	5% (0.35)			5% (0.35)			5% (0.35)		5% (0.35)
buckwheat, sulfur	ERUM	5% (0.20)	5% (0.20)			5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	
buckwheat, Wyeth	ERHE2		5% (0.30)			5% (0.30)					
coneflower, prairie	RACO3	5% (0.06)	5% (0.06)			5% (0.06)				5% (0.06)	5% (0.06)
coneflower, western	RUOC2		5% (0.15)								5% (0.15)
daisy, fleabane (aspen) ⁵	ERSP4		5% (0.03)								5% (0.03)
elephanthead lousewort ⁵	PEGR2										5% (0.25)
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)
geranium, sticky	GEVI2		5% (0.75)								5% (0.75)
globemallow, gooseberryleaf ⁸	SPGR2		5% (0.10)			5% (0.10)					
globemallow, scarlet	SPCO	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
harebell ⁵	CARO2		5% (0.05)			5% (0.05)					5% (0.05)
hawksbeard, tapertip ⁵	CRAC2	5% (0.05)	5% (0.05)			5% (0.05)		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)
Indian paintbrush, lesser ⁵	CAMIM6						5% (0.03)				5% (0.03)
Indian paintbrush narrowleaf ⁵	CALI4	5% (0.03)	5% (0.03)			5% (0.03)			5% (0.03)	5% (0.03)	

Table 7. MLRA 34A	PLANT SYMBOL ¹	Cy, DC, SwCy	LL, CyO, Ly, LyO, SwLy, Sly	IC	SnLy	Sa, Sy, SwSy	SS, SL	SU, Sh	CU, Gr, VS	SwB, RH	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Indian paintbrush, splitleaf ⁵	CARH4		5% (0.03)								5% (0.03)
Indian paintbrush, sulphur ⁵	CASU12		5% (0.03)								5% (0.03)
iris, Rocky Mountain	IRMI						5% (1.00)				5% (1.00)
lupine, silky ^{10, 11}	LUSE4		5% (1.75)			5% (1.75)					5% (1.75)
lupine, silvery ^{10, 11}	LUAR3		5% (0.35)			5% (0.35)					5% (0.35)
milkvetch, Canada ^{10, 11}	ASCA11			5% (0.15)	5% (0.10)						5% (0.15)
monkeyflower, seep ⁵	MIGU						5% (0.03)				5% (0.03)
penstemon, firecracker (Eaton's)	PEEA	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)	
penstemon, fuzzytongue ⁵	PEER	5% (0.15)	5% (0.15)			5% (0.15)			5% (0.15)	5% (0.15)	
penstemon, little-flowered	PEPR2		5% (0.03)			5% (0.03)			5% (0.15)		
penstemon, narrowleaf ⁵	PEAN4	5% (0.15)	5% (0.15)			5% (0.15)			5% (0.15)		
penstemon, Palmer ⁸	PEPA8	5% (0.08)	5% (0.08)			5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)		
phacelia, silverleaf ⁵	PHHA		5% (0.10)			5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)	
scarlet gilia ⁵	IPAG		5% (0.15)			5% (0.15)			5% (0.15)	5% (0.15)	5% (0.15)
sunflower, annual	HEAN3	5% (0.90)	5% (0.90)			5% (0.90)	5% (0.90)	5% (0.90)			
sunflower, Nuttall's ⁵	HENU	5% (0.50)	5% (0.50)								5% (0.50)
sweetvetch, northern ¹¹	HEBO	5% (0.90)	5% (0.90)		5% (0.10)	5% (0.90)				5% (0.10)	5% (0.90)
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)			5% (0.03)		5% (0.03)			5% (0.03)
Shrubs/Trees		15%	20%	45%	30%	15%	15%	55%	10%	40%	10%
bitterbrush, antelope ^{10, 11}	PUTR2	5% (0.10)				5% (0.10)			5% (0.10)	5% (0.10)	
buffaloberry, silver ^{5, 11}	SHAR		5% (C)				5% (C)				5% (C)
ceanothus, snowbrush ¹¹	CEVE										
chokecherry ⁴	PRVI		5% (C)								5% (C)
cottonwood, narrowleaf ⁵	POAN3		10% (C)								
cottonwood, plains	PODE3		10% (C)								
currant, golden ^{4, 5}	RIAU		5% (0.05)								5% (C)
currant, wax ^{4, 5}	RICE		5% (C)								
dogwood, redosier ^{4, 5}	COSES										5% (C)
greasewood ¹⁰	SAVE4						15% (0.15)	5% (0.05)			
hawthorn, black	CRDO2										5% (C)
juniper, Rocky Mountain ⁵	JUSC								5% (C)	45% (C)	
mountain mahogany, true ¹¹	CEMO2								15 (0.75)	45% (0.45)	
pine, limber ⁵	PIFL2									5% (C)	

Table 7. MLRA 34A	PLANT SYMBOL ¹	Cy, DC, SwCy	LL, CyO, Ly, LyO, SwLy, Sly	IC	SnLy	Sa, Sy, SwSy	SS, SL	SU, Sh	CU, Gr, VS	SwB, RH	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
rabbitbrush, green (yellow)	CHVI8	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
rabbitbrush, rubber	ERNA10		5% (0.03)				5% (0.03)				5% (0.03)
rose, Woods ⁵	ROWO		5% (0.05)								5% (0.05)
sagebrush, big (basin)	ARTRT										
sagebrush, big (Wyoming)	ARTRW8	15% (0.15)	10% (0.10)		5% (0.05)	5% (0.05)			5% (0.05)	5% (0.05)	
sagebrush, birdfoot ⁵	ARPE6			30% (0.15)	15% (0.08)		5% (0.03)	5% (0.03)			
sagebrush, black	ARNO4		5% (0.05)			5% (0.05)			5% (0.05)	5% (0.05)	
sagebrush, silver	ARCA13		15% (0.15)			10% (0.10)					
sagewort, bud ⁵	PIDE4							10% (0.10)	5% (0.05)		
sagewort, cudweed ⁵	ARLU		5% (0.01)						5% (0.01)		
saltbush, fourwing dewinged	ATCA						5% (0.25)				
saltbush, Gardner's	ATGA	5% (0.03)	5% (0.03)	15 (0.075)	15 (0.075)		5% (0.03)	45% (0.27)	5% (0.03)		
saltbush, mat ⁸	ATCO4		5% (0.25)				5% (0.25)	5% (0.25)	5% (0.25)		
serviceberry ⁴	AMAL2										5% (0.05)
shadscale ⁵	ATCO										
shrubby cinquefoil ^{4,5}	DAFRF										
silverberry ^{4, 5, 11}	ELCO						5% (C)				5% (C)
snowberry, mountain	SYOR2										
snowberry, western	SYOC		5% (0.15)			5% (0.15)					
sumac, skunkbush ⁴	RHTR	5% (0.10)				5% (0.10)					5% (C)
willow spp. ⁴	SALIX						5% (C)				10% (C)
winterfat	KRLA2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.03)	5% (0.05)	5% (0.05)	5% (0.05)	10% (0.10)	5% (0.03)	

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 8. Species Percent Composition and Seed Rates for Revegetation of MLRA 49 – Zone 10 Foothills and Mountains Southeast (15 - 19 SE) Ecological Sites.

Table 8. MLRA 49	PLANT SYMBOL ¹	CS	Ig	Ly	LyO	RH	Swlg	SwLy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		70%	65%	70%	75%	55%	65%	75%	80%	75%	75%
bluegrass, big	POAM	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)		
bluegrass, Canby's	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)	
bluegrass, mutton	POFE		5% (0.05)								
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
bluestem, little	SCSC	10% (0.4)	5 % (0.25)			5 % (0.25)				10% (0.40)	
brome, mountain	BRMA4	5% (0.50)			5% (0.50)						
brome, nodding	BRAN	5% (0.50)		5% (0.50)	5% (0.50)						
fescue, Idaho	FEID	20% (0.60)	5% (0.15)	20% (0.60)	5% (0.15)		25% (0.75)	5% (0.15)		15% (0.45)	
fescue, spike	LEK12	5% (0.20)		5% (0.20)		20% (0.80)		5% (0.20)			
grama, sideoats	BOCU	10% (0.45)				5% (0.23)		5% (0.23)		10% (0.45)	
hairgrass, tufted	DECE								15% (0.24)		40% (0.32)
Indian ricegrass	ACHY	5 (0.30)		5 (0.30)		5 (0.30)	5 (0.30)				
mannagrass, American	GLGR										5% (0.05)
mannagrass, tall	GLST								5% (0.35)		5% (0.35)
muhly, mat ⁵	MURI		5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)		5% (0.05)		
muhly, mountain ⁵	MUMO	5% (.05)	5% (.05)	5% (.05)	5% (.05)	5% (.05)		5% (.05)			
needleandthread ⁶	HECO26	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)	20% (1.20)	5% (0.30)	5% (0.30)		15% (0.90)	
needlegrass, Columbia	ACNE9	5% (0.30)	5% (0.30)	5% (0.30)	5% (0.30)			5 (0.30)			
needlegrass, green	NAVI4			5% (0.30)	5% (0.30)						
needlegrass, Lettermans ⁵	ACLE9	5% (0.20)		5% (0.20)							
prairie junegrass	KOMA	10% (0.10)	5% (0.05)	10% (0.10)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	
reedgrass, bluejoint ⁵	CACAM								5% (0.03)		5% (0.03)
reedgrass, northern	CAST13								5% (0.03)		5% (0.03)
rush, Baltic ^{4,12}	JUARL										5% (0.01)
sedge, Nebraska ⁴	CANE2								5% (0.25)		25% (1.25)
sedge, woolly ^{4,5}	CAPE42								5% (0.25)		10% (0.50)
spike trisetum ⁵	TRSP	5% (0.05)		5% (0.05)				5% (0.05)			
squirreltail, bottlebrush ⁶	ELEL5	5% (0.25)									
wheatgrass, bluebunch	PSSP6	30% (2.10)	35% (2.45)	20% (1.40)		30% (2.10)	25% (1.75)	35% (2.45)		40% (2.80)	
wheatgrass, Montana ⁵	ELAL7	5% (0.30)	5% (0.30)	10% (0.60)			5% (0.30)	15% (0.90)			
wheatgrass, slender	ELTR7				5% (0.30)				10% (0.06)		
wheatgrass, streambank ⁷	ELLAL	10% (0.06)	5% (0.30)			10% (0.06)	10% (0.06)			10% (0.06)	

Table 8. MLRA 49	PLANT SYMBOL ¹	CS	Ig	Ly	LyO	RH	Swlg	SwLy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
wheatgrass, thickspike ⁷	ELLAL	10% (0.06)	5% (0.30)			10% (0.06)	10% (0.06)			10% (0.06)	
wheatgrass, western ⁷	PASM	10% (0.06)	5% (0.30)	5% (0.30)	20% (1.20)	5% (0.30)	5% (0.30)		10% (0.06)		
wildrye, basin	LECI4			5% (0.30)	35% (2.10)				40% (2.40)		
wildrye, Canada	ELCA4				5% (0.30)				5% (0.30)		
Forbs		15%	15%	15%	15%	10%	15%	15%	10%	15%	10%
balsamroot, arrowleaf	BASA3		5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)	5% (0.75)			
buckwheat, sulfur	ERIOG		5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)		5% (0.20)	
coneflower, prairie	RACO3			5% (0.06)	5% (0.06)	5% (0.06)		5% (0.06)			
coneflower, western ⁵	RUOC2			5% (0.15)	5% (0.15)				5% (0.15)		5% (0.15)
daisy, cutleaf ⁵ (250,000)	ERCO4		5% (0.15)			5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	
elephanthead lousewort ⁵	PEGR2								5% (0.25)		5% (0.25)
flax, prairie (Lewis)	LILE3			5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	
globemallow, scarlet	SPCO	5% (0.10)		5% (0.10)	5% (0.10)			5% (0.10)			
harebell ⁵	CARO2			5% (0.05)	5% (0.05)			5% (0.05)			
hawksbeard, tapertip ⁵	CRAC2		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)		5% (0.05)	
lupine, silvery ^{10, 11}	LUAR3			5% (0.05)							
penstemon, fuzzytongue ⁵	PEER			5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	
penstemon, Rocky Mtn	PEST2			5% (0.08)	5% (0.08)			5% (0.08)			
penstemon, Rydberg's ⁵	PERY			5% (0.35)	5% (0.35)			5% (0.35)			
phacelia, silverleaf ⁵	PHHA			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
scarlet gilia ⁵	IPAG			5% (0.15)	5% (0.15)			5% (0.15)			
sunflower, common woolly ⁵	ERLA6			5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)			
sunflower, Nuttall's ⁵	HENU			5% (0.50)	5% (0.50)	5% (0.50)		5% (0.50)			
tansyaster, hoary	MACA2		5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			
violet, hookedspur	VIAD	5% (0.05)		5% (0.05)	5% (0.05)				5% (0.05)		
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	
Shrubs/Trees		15%	25%	15%	10%	45%	25%	10%	10%	10%	15%
alder, speckled ^{4,11}	ALINR								5% (C)		10% (C)
birch, water ⁴	BEOC2										10% (C)
bitterbrush, antelope ^{10, 11}	PUTR2	5% (0.10)				10% (0.20)	5% (0.10)	5% (0.10)		10% (0.20)	
ceanothus, snowbrush ¹¹	CEVE				5% (0.05)						
chokecherry ⁴	PRVI			5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)			
currant, golden ^{4,5}	RIAU			5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)			

Table 8. MLRA 49	PLANT SYMBOL ¹	CS	Ig	Ly	LyO	RH	Swlg	SwLy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
currant, wax ^{4,5}	RICE		5 (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)		5% (0.10)	
hawthorne, black ⁴	CRDO2								5% (0.05)		5% (0.05)
juniper, Rocky Mountain ⁵	JUSC		5% (C)			5% (C)				5% (C)	
mtn mahogany alderleaf ⁴	CEMO2		5% (C)			40% (C)	5% (C)			10% (C)	
pine, ponderosa ⁴	PIPO		10% (0.20)			5% (0.10)				5% (0.10)	
rabbitbrush, green	CHVI8	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)			
rabbitbrush, rubber	ERNA10						5% (0.03)		5% (0.03)		
rose, Woods ⁵	ROWO	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)		5% (0.10)	
sagebrush, big (Mountain)	ARTRV		10% (0.20)	10% (0.20)	10% (0.20)	5% (0.10)		10% (0.20)		5% (0.10)	
sagebrush, big (Wyoming)	ARTRW8	5% (0.10)		5 (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
sagebrush, black	ARNO4	5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)	5% (0.10)		10% (0.20)	
sagebrush, mountain silver ⁵	ARCAV2			5% (0.10)	10% (0.20)			5% (0.10)			
sagebrush, silver	ARCA13	5% (0.10)			10% (0.20)			5% (0.10)			
sagebrush, threetip ⁵	ARTRT2	5% (0.03)	10% (0.05)	10% (0.05)			15% (0.08)	5% (0.03)		5% (0.03)	
sagewort, cudweed ⁵	ARLU		5% (0.01)		5% (0.01)		5% (0.01)				
sagewort, fringed	ARFR4	5% (0.03)		5% (0.03)		5% (0.03)	5% (0.03)			5% (0.03)	
Serviceberry ⁴	AMAL2	5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)	
snowberry, common	SYAL			5% (0.30)	5% (0.30)	5% (0.30)		5% (0.30)			
snowberry, western	SYOR2			5% (0.30)	5% (0.30)	5% (0.30)		5% (0.30)			
willow spp. ⁴	SALIX								5% (C)		15% (C)
winterfat	KRLA2	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)				

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 9. Species Percent Composition and Seed Rates for Revegetation of MLRA 67A – Zones 11 & 12 Southern Plains (12 - 14 & 15 - 17 SP) Ecological Sites.

Table 9. MLRA 67A	PLANT SYMBOL ¹	CS, Sa	Cy, CyO	Ly, LyL, LyO	LiU	SL, SS	SU	Sy, SyL	Sb	Sw, Gr, VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		80%	85%	85%	85%	90%	85%	80%	85%	80%	60%
alkali sacaton	SPAI					45% (0.45)	15% (0.15)		5% (0.05)		
bentgrass, creeping (redtop)	AGST2					5% (0.03)			10% (0.05)		5% (0.03)
blowoutgrass	REFL	5% (0.08)									
bluegrass, spp.	POA								5% (0.10)		5% (0.10)
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)				5% (0.10)	
bluestem, big	ANGE			15% (0.90)					25% (1.50)		
bluestem, little	SCSC	20% (0.80)	5% (0.20)	10% (0.40)	15% (0.60)			30% (1.20)	5% (0.20)	35% (1.40)	
bluestem, sand	ANHA	40% (3.20)						30% (2.40)		5% (0.40)	
buffalograss	BODA2		5% (0.50)	5% (0.50)	5% (0.50)		15% (1.50)			5% (0.50)	
bulrush, alkali ⁴	BOMA2					5% (0.40)					5% (0.40)
bulrush, softstem ⁴	SCTA2										5% (0.10)
bulrush, three-square ⁴	SCPU10										5% (0.10)
cattails ⁴	TYPHA					5% (0.05)					5% (0.05)
cordgrass, alkali	SPGR					10% (0.60)					
cordgrass, prairie	SPPE								15% (0.30)		55% (3.30)
dropseed, sand	SPCR	5% (0.05)			5% (0.05)			5% (0.05)		5% (0.05)	
grama, blue	BOGR2	10% (0.20)	15% (0.30)	15% (0.30)	25% (0.50)	5% (0.10)	25% (0.50)	15% (0.30)		15% (0.30)	
grama, hairy	BOHI2	5% (0.10)						5% (0.10)		5% (0.10)	
grama, sideoats	BOCU	5% (0.23)	10% (0.45)	5% (0.23)	15% (0.68)			5% (0.23)		10% (0.45)	
green needlegrass	NAVI4		25% (1.50)	15% (0.90)	5% (0.30)						
Indiangrass	SONU2			5% (0.25)				5% (0.25)	15% (0.45)		
junegrass, prairie	KOMA	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			5% (0.05)		5% (0.05)	
lovegrass, sand	ERTR3	10% (0.05)						10% (0.05)			
muhly, alkali ⁵	MUAS					5% (0.05)					
muhly, marsh	MURA								5% (0.03)		5% (0.03)
muhly, sandhills ⁵	MUPU3	5% (0.60)									
needleandthread ⁶	HECO26	30% (1.80)		30% (1.80)	20% (1.20)		15% (0.90)	40% (2.40)		25% (1.50)	
Nuttall's alkaligrass	PUNU2					5% (0.05)					
Indian ricegrass	ACHY	10% (0.60)		5% (0.30)			5% (0.30)	15% (0.90)		10% (0.60)	
inland saltgrass	DISP					15% (0.45)	5% (0.15)				
prairie sandreed	CALO	45% (1.80)		5% (0.20)	5% (0.20)			35% (1.40)		10% (0.40)	
reed canarygrass ¹³	PHAR3										5% (0.20)
reedgrass, northern	CASTI3								5% (0.03)		15% (0.08)

Table 9. MLRA 67A	PLANT SYMBOL ¹	CS, Sa	Cy, CyO	Ly, LyL, LyO	LiU	SL, SS	SU	Sy, SyL	Sb	Sw, Gr, VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
reedgrass, bluejoint ⁵	CACAM								5% (0.03)		15% (0.08)
rush, Baltic ⁴	JUARL					5% (0.01)			5% (0.01)		5% (0.01)
sedge, Nebraska ⁴	CANE2					5% (0.25)					25% (1.25)
sedge, water ^{4,5}	CAAQ										5% (0.25)
sedge, woolly ^{4,5}	CAPE42										5% (0.25)
switchgrass	PAVI2	10% (0.25)	5% (0.13)	5% (0.13)		5% (0.13)		10% (0.25)	5% (0.13)		
wheatgrass, bluebunch	PSSP6									30% (2.10)	
wheatgrass, slender	ELTR7		5% (0.30)	5% (0.30)		5% (0.30)			10% (0.60)	5% (0.30)	
wheatgrass, thickspike ⁷	ELLAL			5% (0.30)				15% (0.90)		15% (0.90)	
wheatgrass, western ⁷	PASM		50% (3.00)	40% (2.40)	10% (0.60)	20% (1.20)	50% (3.00)	5% (0.30)	10% (0.60)	15% (0.90)	
wildrye, basin	LECI4			5% (0.30)					5% (0.30)		
wildrye, Canada	ELCA4		5% (0.30)	5% (0.30)		5% (0.30)		5% (0.30)	5% (0.30)		
Forbs		5%	10%	10%	10%	5%	5%	10%	5%	10%	30%
blanketflower	GAAR			5% (0.35)				5% (0.35)		5% (0.35)	
buckwheat, sulfur	ERUM		5% (0.15)	5% (0.15)	5% (0.15)					5% (0.15)	
coneflower, prairie	RACO3		5% (0.06)	5% (0.06)				5% (0.06)		5% (0.06)	
elephanthead lousewort ⁵	PEGR2								5% (0.25)		5% (0.25)
flax, prairie (Lewis)	LILE3	5% (0.15)		5% (0.15)				5% (0.15)		5% (0.15)	
gayfeather, dotted ⁵	LIPU			5% (0.32)	5% (0.32)			5% (0.32)		5% (0.32)	
globemallow, scarlet	SPCO		5% (0.10)	5% (0.10)						5% (0.10)	
Indian paintbrush, downy ⁵	CASE5			5% (0.03)				5% (0.03)			
milkweed, showy ⁵	ASSP			5% (0.60)				5% (0.60)		5% (0.60)	
penstemon, narrowleaf ⁵	PEAN4			5% (0.15)	5% (0.15)			5% (0.15)		5% (0.15)	
penstemon, fuzzytongue ⁵	PEER			5% (0.15)	5% (0.15)			5% (0.15)		5% (0.15)	
phacelia, silverleaf ⁵	PHHA			5% (0.10)	5% (0.10)			5% (0.10)		5% (0.10)	
prairie clover, purple	DAPU5		5% (0.15)	5% (0.15)	5% (0.15)			5% (0.15)			
prairie clover, white	DACA7				5% (0.15)					5% (0.15)	
scarlet gilia ⁵	IPAG		5% (0.15)	5% (0.15)	5% (0.15)						
sego lily	CANU3		5% (0.23)	5% (0.23)	5% (0.23)			5% (0.23)		5% (0.23)	
yarrow, western ^{9,12}	ACMIO		5% (0.03)	5% (0.03)				5% (0.03)			
Shrubs/Trees		15%	5%	5%	5%	5%	10%	10%	5%	10%	10%
ash, green ⁴	FRPE			5% (0.01)							
boxelder ⁴	ACNE2			5% (0.03)				5% (0.03)	5% (0.03)		
chokecherry ⁴	PRVI			5% (0.10)				5% (0.10)			
cottonwood, plains ⁴	PODEM			15% (0.08)				15% (0.08)			

Table 9. MLRA 67A	PLANT SYMBOL ¹	CS, Sa	Cy, CyO	Ly, LyL, LyO	LiU	SL, SS	SU	Sy, SyL	Sb	Sw, Gr, VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
currant, golden ^{4,5}	RIAU			5% (0.05)						5% (0.05)	
currant, wax ^{4,5}	RICE			5% (0.05)						5% (0.05)	
greasewood ¹⁰	SAVE4					40% (0.40)					
hawthorn, black ⁴	CRDO2									5% (0.05)	
juniper, Rocky Mtn ⁵	JUSC2									5% (C)	
mtn mahogany alderleaf ⁴	CEMOM4									15% (0.75)	
pine, ponderosa ⁴	PIPO									5% (0.05)	
plum, American ⁴	PRAM			5% (1.00)				5% (1.00)		5% (1.00)	
rabbitbrush, green	CHV18		5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)	5% (0.25)		5% (0.25)	
rabbitbrush, rubber	ERNA10		5% (0.25)	5% (0.25)		5% (0.25)	5% (0.25)				
rose, Arkansas ⁵	ROAR3	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)			5% (0.05)			
sagebrush, sand	ARFI2	5% (0.03)						5% (0.03)			
sagebrush, silver	ARCA13		5% (0.05)	10% (0.10)				10% (0.10)		5% (0.05)	
saltbush, fourwing dewinged	ATCA2		5% (0.25)	5% (0.25)		5% (0.25)	10% (0.50)			5% (0.25)	
saltbush, Gardner's	ATGA					5% (0.03)	5% (0.03)				
sandcherry, western ⁴	PRPUB	5% (0.50)						5% (0.50)			
silver buffaloberry ^{4,5}	SHAR		5% (0.25)	5% (0.25)		5% (0.25)		5% (0.25)	5% (0.25)		
skunkbrush sumac ⁴	RHAR4									5% (0.10)	
snowberry, western	SYOC			5% (0.15)				5% (0.15)	5% (0.15)		
willow spp. ⁴	SALIX								10% (C)		
winterfat	KRLA2		5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)			5% (0.05)	
yucca, soapweed	YUGL	5% (0.05)			5% (0.05)			5% (0.05)		5% (0.05)	

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 10. Species Percent Composition and Seed Rates for Revegetation of MLRA 43B – Zone 13 Northern Plains (15 - 19 NP) Ecological Sites.

Table 10. MLRA 43B	PLANT SYMBOL ¹	Cy	CU	Ly	LL, Ov	RH	Sy	SwCy, SwLy, SwSy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		80%	90%	70%	65%	40%	85%	80%	85%	70%	85%
bluegrass, big	POAM	5% (0.10)	5% (0.10)	5% (0.10)				5% (0.10)		5% (0.10)	
bluegrass, Canby	POCA	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)	5% (0.05)			
bluegrass, fowl	POPA2	5% (0.10)			5% (0.10)				5% (0.10)		
bluegrass, mutton	POFE		5% (0.05)								
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
bluestem, little	SCSC						10% (0.40)	15% (0.60)		25% (1.00)	
bluestem, sand	ANHA						30% (2.40)	10% (0.80)			
brome, mountain	BRMA4	5% (0.50)	5% (0.50)	5% (0.50)				5% (0.50)			
cordgrass, prairie	SPPE								5% (0.25)		
dropseed, sand	SPCR						5% (0.05)	5% (0.05)			
fescue, Idaho	FEID	10% (0.30)	25% (0.75)	25% (0.75)	5% (0.15)		5% (0.15)	25% (0.75)	5% (0.15)	5% (0.15)	
fescue, spike	LEKI2	10% (0.40)	10% (0.40)	25% (1.00)		15% (0.60)		10% (0.40)		10% (0.40)	
grama, blue	BOGR2	5% (0.10)		5% (0.10)			5% (0.10)	5% (0.10)		5% (0.10)	
grama, sideoats	BOCU	10% (0.80)						5% (0.40)		5% (0.40)	
hairgrass, tufted	DECE								20% (0.30)		25% (0.38)
Indian ricegrass	ACHY	5% (0.30)	5% (0.30)	5% (0.30)			10% (0.60)	5% (0.30)			
mannagrass, fowl	GLST										5% (0.35)
muhly, plains ⁵	MUCU3							5% (0.05)			
needleandthread ⁶	HECO26			10% (0.60)	5% (0.30)	5% (0.30)	25% (1.50)	15% (0.90)		5% (0.30)	
needlegrass, Columbia	ACNE9		25% (1.50)		10% (0.60)			5% (0.30)			
needlegrass, green	NAVI4	40% (2.40)		25% (1.50)	25% (1.50)		10% (0.60)	10% (0.60)		5% (0.30)	
needlegrass, Letterman's ⁵	ACLE9	5%(.2)									
oatgrass, onespike ⁵	DAUN	5% (0.10)	5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)		5% (0.10)	
prairie junegrass	KOMA	5% (0.05)	10% (0.10)	10% (0.10)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	
prairie sandreed	CALO						30% (1.20)				
reedgrass, bluejoint ⁵	CACA4								5% (0.03)		10% (0.05)
reedgrass, northern	CASTI3								5% (0.03)		15% (0.08)
rush, Baltic ⁴	JUARL								5% (0.01)		5% (0.01)
sedge, Nebraska ⁴	CANE2								25% (1.50)		25% (1.50)
spike trisetum ⁵	TRSP2	5% (0.05)	5% (0.05)	5% (0.05)				5% (0.05)			
squirreltail, bottlebrush ⁶	ELEL5	5%(.25)						5%(.25)			
timothy, alpine	PHAL2								5% (0.05)		
wheatgrass, bluebunch	PSSP6		10% (0.70)	10% (0.70)		30% (2.10)		25% (1.75)		50% (3.50)	
wheatgrass, Montana ⁵	ELAL7			5%(.3)				5% (0.30)			

Table 10. MLRA 43B	PLANT SYMBOL ¹	Cy	CU	Ly	LL, Ov	RH	Sy	SwCy, SwLy, SwSy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
wheatgrass, slender	ELTR7	5% (0.30)	5% (0.30)		10% (0.60)			5% (0.30)			
wheatgrass, thickspike ⁷	ELLAL	20% (1.20)						5% (0.30)			
wheatgrass, western ⁷	PASM	20% (1.20)	20% (1.20)	20% (1.20)	25% (1.50)	20% (1.20)	10% (0.60)	25% (1.50)	5% (0.30)	10% (0.60)	
wildrye, basin	LECI4			5% (0.30)	25% (1.50)				5% (0.30)		
wildrye, blue	ELGL	5% (0.30)					5% (0.30)	5% (0.30)			
wildrye, Canada	ELCA4				10% (0.60)				5% (0.30)		
Forbs		10%	5%	15%	15%	10%	10%	10%	5%	15%	10%
balsamroot, arrowleaf	BASA3					5% (0.75)				5% (0.75)	
blanketflower	GAAR	5% (0.35)		5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)		5% (0.35)	
coneflower, prairie	RACO3	5% (0.06)		5% (0.06)			5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	
flax, prairie (Lewis)	LILE3	5% (0.15)				5% (0.15)				5% (0.15)	
gayfeather, dotted ⁵	LIPU					5% (0.32)	5% (0.32)	5% (0.32)			
penstemon, narrowleaf ⁵	PEAN4			5% (0.15)			5% (0.15)	5% (0.15)			
prairie clover, purple	DAPU5	5% (0.15)		5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)		5% (0.15)	
prairie clover, white	DACA7	5% (0.15)		5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)		5% (0.15)	
vetch, American ⁵	VIAM	5% (0.35)		5% (0.35)	5% (0.35)		5% (0.35)	5% (0.35)		5% (0.35)	
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
Shrubs/Trees		10%	5%	15%	20%	50%	5%	10%	10%	20%	5%
ash, green ⁴	FRPE				5% (C)						
boxelder ⁴	ACNE2				5% (C)				5% (C)		
chokecherry ⁴	PRVIV				5% (C)				5% (C)	5% (C)	
cottonwood, narrowleaf ⁴	POAN3				10% (C)						
hawthorn, northern ⁴	CRCH				5% (C)				5% (C)	5% (C)	
juniper, common ⁴	JUCO6									5% (C)	
juniper, Rocky Mountain ⁵	JUSC2					5% (C)				5% (C)	
mountain mahogany, true ¹¹	CEMO2					40% (C)					
pine, ponderosa	PIPO					5% (C)				5% (C)	
plum, American ⁴	PRAM				5% (C)				5% (C)		
rabbitbrush, rubber	ERNA10	5% (0.03)		5% (0.03)		5% (0.03)		5% (0.03)		5% (0.03)	
rose, Woods ⁵	ROWO			5% (0.05)					5% (0.05)	5% (0.05)	
sagebrush, big (Wyoming)	ARTRW8	5% (0.05)	5% (0.05)	5% (0.05)		10% (0.10)	5% (0.05)	5% (0.05)		5% (0.05)	
sagebrush, black	ARNO4									5% (0.05)	
sagebrush, plains silver	ARCAC			5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)		5% (0.05)	
sagebrush, threetip ⁵	ARTRT2		5% (0.03)								
snowberry, common	SYAL				5% (0.15)			5% (0.15)	5% (0.15)	5% (0.15)	

Table 10. MLRA 43B	PLANT SYMBOL ¹	Cy	CU	Ly	LL, Ov	RH	Sy	SwCy, SwLy, SwSy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
sumac, skunkbush ⁴	RHTR					10% (C)		5% (C)		5% (C)	
willow spp. ⁴	SALIX								5% (C)		5% (C)
winterfat	KRLA2	5% (0.05)						5% (0.05)			
yucca, soapweed	YUGL							5% (0.05)			

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 11. Species Percent Composition and Seed Rates for Revegetation of MLRA 58B – Zone 14 Northern Plains (10 - 14 NP) Ecological Sites.

Table 11. MLRA 58B	PLANT SYMBOL ¹	Cy, CyO, DC, SwCy	Ly, Ov	LL	SL, SS, SU, Sh	Sa, Sy	SwLy	SwSy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		75%	70%	60%	80%	80%	75%	70%	80%	75%	80%
alkali sacaton	SPAI				50% (0.50)						
bluegrass, Canby	POCA	10% (0.10)	10% (0.10)	10% (0.10)	5% (0.05)					5% (0.05)	
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	
bluestem, big	ANGE									5% (0.30)	
bluestem, little	SCSC				15% (0.60)	10% (0.40)	10% (0.40)	10% (0.40)		10% (0.40)	
bluestem, sand	ANHA					25% (2.00)					
buffalograss	BODA2	5% (0.50)	5% (0.50)								
cordgrass, alkali	SPGR				5% (0.25)						
cordgrass, prairie	SPPE								15% (0.75)		
dropseed, sand	SPCR					5% (0.05)		5% (0.05)		5% (0.05)	
grama, blue	BOGR2	10% (0.20)	15% (0.30)			10% (0.20)	10% (0.20)	10% (0.20)		5% (0.10)	
grama, hairy ⁵	BOH12	10% (0.20)	5% (0.10)			10% (0.20)	10% (0.20)	10% (0.20)		5% (0.10)	
grama, sideoats	BOCU					10% (0.80)	5% (0.40)	10% (0.80)			
hairgrass, tufted	DECE								10% (0.15)		25% (0.38)
Indian ricegrass	ACHY		5% (0.30)		10% (0.60)	15% (0.90)	5% (0.30)	10% (0.60)		5% (0.30)	
inland saltgrass	DISP				15% (0.90)						
needleandthread ⁶	HECO26		25% (1.50)	10% (0.60)		25% (1.50)	10% (0.60)	25% (1.50)		10% (0.60)	
needlegrass, green	NAVI4	40% (2.40)	25% (1.50)	25% (1.50)	15% (0.90)		5% (0.30)				
Nuttall's alkaligrass	PUNU2				10% (0.10)						
prairie junegrass	KOMA	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	
prairie sandreed	CALO					50% (2.00)		20% (0.80)		5% (0.20)	
reedgrass, bluejoint ⁵	CACA4										25% (0.13)
reedgrass, northern	CAST13										25% (0.13)
rush, Baltic ⁴	JUARL								5% (0.01)		10% (0.20)
sedge, Nebraska ⁴	CANE2								15% (0.90)		25% (1.50)
squirreltail, bottlebrush ⁶	ELELE	5% (0.25)			10% (0.50)					5% (0.25)	
wheatgrass, bluebunch	PSSP6		5% (0.35)		10% (0.70)		50% (3.50)	10% (0.70)		50% (3.50)	
wheatgrass, slender	ELTR7			10% (0.60)					15% (0.90)		
wheatgrass, thickspike ⁷	ELLAL	40% (2.40)	25%(1.50)	10% (0.60)	15% (0.90)	10% (0.60)	15% (0.90)	10% (0.60)	20% (1.20)	10% (0.60)	
wheatgrass, western ⁷	PASM	40% (2.40)	25%(1.50)	10% (0.60)	15% (0.90)	10% (0.60)	15% (0.90)	10% (0.60)	20% (1.20)	10% (0.60)	
wildrye, basin	LECI4	50% (3.00)	50% (3.00)	5% (0.30)					15% (0.90)		10% (0.60)
wildrye, Canada	ELCA4	10% (0.60)	5% (0.30)	5% (0.30)					5% (0.30)		
Forbs		15%	15%	10%	10%	10%	15%	15%	15%	15%	10%
blanketflower	GAAR	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	

Table 11. MLRA 58B	PLANT SYMBOL ¹	Cy, CyO, DC, SwCy	Ly, Ov	LL	SL, SS, SU, Sh	Sa, Sy	SwLy	SwSy	Sb	VS	WL
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
buckwheat, sulfur	ERUM	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)	5% (0.20)		5% (0.20)	
coneflower, prairie	RACO3	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	
gayfeather, dotted ⁵	LIPU	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	
penstemon, Rocky Mtn	PEST2	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	
prairie clover, purple	DAPU5	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	
prairie clover, white	DACA7	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	
sunflower, Maximilian	HEMA2	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	5% (0.05)	
vetch, American ⁵	VIAM	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	
yarrow, western ⁹	ACMIO	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)		5% (0.03)	
Shrubs/Trees		10%	15%	30%	10%	10%	10%	15%	5%	10%	10%
cottonwood, plains ⁴	PODE3			10% (C)	5% (C)						
greasewood ¹⁰	SAVE4	5% (0.05)			20% (0.20)						
juniper, Rocky Mountain ⁵	JUSC2				5% (C)					5% (C)	
pine, ponderosa	PIPO				5% (C)					5% (C)	
rabbitbrush, green (yellow)	CHVI8					5% (0.03)		5% (0.03)			
rabbitbrush, rubber	ERNA10	5% (0.03)		5% (0.03)	5% (0.03)		5% (0.03)				
rose, Woods ⁵	ROWO			5% (0.05)							
sagebrush, big (Wyoming)	ARTRW8	10% (0.10)	10% (0.10)			5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)	
sagebrush, birdfoot ⁵	ARPE6	10% (0.05)			5% (0.03)						
sagebrush, plains silver	ARCAC		5% (0.05)	5% (0.05)		5% (0.05)	5% (0.05)	5% (0.05)			
saltbush, fourwing dewinged	ATCA2				5% (0.25)			10% (0.50)			
saltbush, fourwing (winged)	ATCA2				5% (0.50)			10% (1.00)			
saltbush, Gardner's	ATGA				50% (0.24)						
silverberry ^{4, 5}	ELCO			5% (C)							
snowberry, common	SYAL	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)					
sumac, skunkbush ⁴	RHTR						5% (C)	5% (C)		5% (C)	
willow spp. ⁴	SALIX								10% (C)		10% (C)
winterfat	KRLA2	5% (0.05)	10% (0.10)		10% (0.10)	5% (0.05)	5% (0.05)	5% (0.05)			
yucca, soapweed	YUGL					5% (0.05)		5% (0.05)			

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 12. Species Percent Composition and Seed Rates for Revegetation of MLRA 58B – Zone 15 Northern Plains (15 - 17 NP) Ecological Sites.

Table 12. MLRA 58B	PLANT SYMBOL ¹	CyO, Cy, DC, SwCy	Ly, SwLy	LL, Ov	SL, SS	SU	Sa, Sy	PC, SwPC	SwSy	Sh, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		75%	80%	70%	85%	50%	85%	80%	75%	70%	80%
alkali sacaton	SPAI				50% (0.50)	10% (0.10)			5% (0.05)	5% (0.05)	
bluegrass, Canby	POSE	5% (0.05)	5% (0.05)	10% (0.10)							
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)	
bluestem, big	ANGE	20% (1.20)	10% (0.60)	25% (1.50)				15% (0.90)		5% (0.30)	
bluestem, little	SCSC	10% (0.40)	10% (0.40)	5% (0.20)			10% (0.40)	40% (1.60)	10% (0.40)	10% (0.40)	
bluestem, sand	ANHA						25% (2.00)	15% (1.20)	5% (0.40)		
buffalograss	BODA2	5% (0.50)									
cordgrass, alkali	SPGR				25% (1.25)						
dropseed, prairie ⁵	SPPE							5% (0.25)			25% (1.25)
dropseed, sand	SPCR						5% (0.50)		5% (0.50)	5% (0.50)	
grama, blue	BOGR2	25% (0.50)	10% (0.20)	5% (0.10)			5% (0.10)	5% (0.10)	5% (0.10)	10% (0.20)	
grama, hairy ⁵	BOHI2	25% (0.50)	10% (0.20)				5% (0.10)			5% (0.10)	
grama, sideoats	BOCU	10% (0.80)	10% (0.80)					5% (0.40)	10% (0.80)	10% (0.80)	
hairgrass, tufted	DECE										25% (0.40)
inland saltgrass	DISP				10% (0.60)	15% (0.90)				5% (0.30)	
Indian ricegrass	ACHY		5% (0.30)			10% (0.60)	10% (0.60)		5% (0.30)	10% (0.60)	
needleandthread ⁶	HECO26		20% (1.20)	5% (0.30)			25% (1.50)	5% (0.30)	25% (1.50)	10% (0.60)	
needlegrass, green	NAVI4	50% (3.00)	15% (0.90)	25% (1.50)						10% (0.60)	
Nuttall's Alkaligrass	PUNU2				15% (.15)						
prairie Junegrass	KOMA	5% (0.05)	5% (0.05)	5% (0.05)			5% (0.05)		5% (0.05)	5% (0.05)	
prairie sandreed	CALO						50% (2.00)	30% (1.20)	20% (0.80)	5% (0.20)	
reedgrass, bluejoint ⁵	CACA4										25% (0.13)
reedgrass, northern	CAST13										25% (0.13)
rush, Baltic ⁴	JUARL										10% (0.20)
sedge, Nebraska ⁴	CANE2										25% (1.50)
squirreltail, bottlebrush ⁶	ELELE	5% (0.25)		5% (0.25)	10% (0.50)	10% (0.50)					
wheatgrass, bluebunch	PSSP6	10% (0.70)	25% (1.75)						10% (0.70)	25% (1.75)	
wheatgrass, slender	ELTR7	10% (0.60)		15% (0.90)							15% (0.90)
wheatgrass, thickspike ⁷	ELLAL	40% (2.40)	25%(1.5)	30% (1.80)	25% (1.50)	15% (0.90)	5% (0.30)	15% (0.90)	10% (0.60)	25% (1.50)	5% (0.30)
wheatgrass, western ⁷	PASM	40% (2.40)	25%(1.5)	30% (1.80)	25% (1.50)	15% (0.90)	5% (0.30)	15% (0.90)	10% (0.60)	25% (1.50)	5% (0.30)
wildrye, basin	LECI4										
wildrye, Canada	ELCA4	5% (0.30)		5% (0.30)						5% (0.30)	5% (0.30)
Forbs		15%	15%	15%	5%	5%	10%	15%	10%	10%	10%
blanketflower	GAAR	5% (0.35)	5% (0.35)	5% (0.35)			5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)

Table 12. MLRA 58B	PLANT SYMBOL ¹	CyO, Cy, DC, SwCy	Ly, SwLy	LL, Ov	SL, SS	SU	Sa, Sy	PC, SwPC	SwSy	Sh, VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
coneflower, prairie	RACO3	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)	5% (0.15)			5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)
gayfeather, dotted ⁵	LIPU	5% (0.32)	5% (0.32)	5% (0.32)			5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)
leadplant	AMCA6							5% (0.25)			
penstemon, Rocky Mtn	PEST2	5% (0.08)	5% (0.08)	5% (0.08)			5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)
prairie clover, purple	DAPU5	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)
prairie clover, white	DACA7	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)
sunflower, Maximilian	HEMA2	5% (0.05)		5% (0.05)	5% (0.05)						5% (0.05)
vetch, American ⁵	VIAM	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)
yarrow, western ⁹	ACHIL	5% (0.03)	5% (0.03)	5% (0.03)			5% (0.03)	5% (0.03)	5% (0.03)	5% (0.03)	
Shrubs/Trees		10%	5%	15%	10%	45%	5%	5%	15%	10%	10%
bur oak ⁴	QUMA2							5% (C)			
cottonwood, plains ⁴	PODEM			10% (C)	5% (C)						
greasewood ¹⁰	SAVE4				20% (0.20)	10% (0.10)					
juniper, Rocky Mountain ⁵	JUSC2							5% (C)		5% (C)	
pine, ponderosa	PIPO	5% (C)						5% (C)		5% (C)	
rabbitbrush, green (yellow)	CHV18						5% (0.03)		5% (0.03)		
rabbitbrush, rubber	ERNA10			5% (0.03)	5% (0.03)		5% (0.03)			10% (0.06)	
rose, Woods ⁵	ROWO			5% (0.05)							
sagebrush, big (Wyoming)	ARTRW8	10% (0.10)	10% (0.10)						5% (0.05)	5% (0.05)	
sagebrush, birdfoot ⁵	ARPE6	5% (0.03)								5% (0.03)	
saltbush, fourwing (winged)	ATCA2	5% (0.25)			5% (0.25)				10% (0.50)		
saltbush, Gardner's	ATGA				5% (0.03)	40% (0.24)				10% (0.06)	
silverberry ^{4,5}	ELCO			5% (C)							
sumac, skunkbush ⁴	RHTR		5% (C)						5% (C)	5% (C)	
snowberry, western	SYOC	5% (0.15)		5% (0.15)			5% (0.15)				
willow spp. ⁴	SALIX										10% (C)
winterfat	KRLA2	5% (0.05)	5% (0.05)	5% (0.05)	10% (0.10)	5% (0.05)			5% (0.05)	5% (0.05)	
yucca, soapweed	YUGL						5% (0.05)		5% (0.05)		

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

- 6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.
- 7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.
- 8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).
- 9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.
- 10 Plant has toxic properties.
- 11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 13. Species Percent Composition and Seed Rates for Revegetation of MLRA 61 – Zone 16 Black Hills (15 - 19 BL) Ecological Sites.

Table 13. MLRA 61	PLANT SYMBOL ¹	Cy, CyO	Ly	LL, Ov	SL, SS	Sa, Sy	SwCy	SwLy	SwSy	VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		85%	85%	70%	85%	90%	80%	80%	75%	80%	90%
alkali sacaton	SPAI				40% (0.40)						
bluegrass, big	POAM	5% (0.10)		10% (0.20)						5% (0.10)	
bluegrass, Canby	POSE	5% (0.05)	5% (0.05)	5% (0.05)		5% (0.05)					
bluegrass, fowl	POPA2	5% (0.10)	5% (0.10)	5% (0.10)			5% (0.10)	5% (0.10)			5% (0.10)
bluegrass, Sandberg	POSE	5% (0.10)	5% (0.10)	5% (0.10)		5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
bluestem, big	ANGE	10% (0.60)	5% (0.30)	10% (0.60)						5% (0.30)	
bluestem, little	SCSC	10% (0.40)	5% (0.20)	5% (0.20)		5% (0.20)	10% (0.40)	25%(1)	10% (0.40)	25% (1.00)	
bluestem, sand	ANHA					50% (4.00)			10% (0.80)	50% (4.00)	
buffalograss	BODA2	5% (0.50)					5% (0.50)				
cordgrass, alkali	SPGR				40% (2.00)						
cordgrass, prairie ⁵	SPPE										40% (2.00)
dropseed, prairie ⁵	SPHE						10% (1.00)				
dropseed, sand	SPCR					5% (0.05)			5% (0.05)		
fescue, spike	LEKI2		5% (0.20)					10% (0.40)	10% (0.40)	10% (0.40)	
grama, blue	BOGR2	5% (0.10)	10%(.2)			5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
grama, hairy ⁵	BOHI2	5% (0.10)					5% (0.10)	5% (0.10)	5% (0.10)	5% (0.10)	
grama, sideoats	BOCU	15% (1.20)	10% (0.80)				15% (1.20)	10% (0.80)	5% (0.40)	10% (0.80)	
hairgrass, tufted	DECE										25% (0.40)
Indian ricegrass	ACHY					15%(0.90)			5% (0.30)		
inland saltgrass	DISP				10% (0.60)						
needleandthread ⁶	HECO26		15% (0.90)	5% (0.30)		20% (1.20)		15% (0.90)	30% (1.80)	5% (0.30)	
needlegrass, Columbia	ACNE9	25% (1.50)	25% (1.50)	10% (0.60)		10% (0.60)					
needlegrass, green	NAVI4	50%(3.00)	25% (1.50)	25% (1.50)			10% (0.60)			5% (0.30)	
Nuttall's Alkaligrass	PUNU2				10% (0.10)						
prairie Junegrass	KOMA		5% (0.05)	5% (0.05)		5% (0.05)	10% (0.1)	5% (0.05)	5% (0.05)		
prairie sandreed	CALO			15% (0.60)		30% (1.20)			35% (1.40)	5% (0.20)	
reedgrass, northern	CAST13										25% (0.13)
rush, Baltic ⁴	JUARL										10% (0.20)
sedge, Nebraska ⁴	CANE2										50% (1.50)
switchgrass	PAVI2	5% (2.50)		5% (2.50)							10% (2.50)
wheatgrass, bluebunch	PSSP6		5% (0.35)				10%(.7)	25%(1.75)	15%(1.05)	35%(2.45)	
wheatgrass, slender	ELTR7	5% (0.30)	5% (0.30)	5% (0.30)							15% (0.90)
wheatgrass, thickspike ⁷	ELLAL		25% (1.50)								
wheatgrass, western ⁷	PASM	30% (1.80)	25% (1.50)	25% (1.50)	25% (1.50)	5% (0.30)	30% (1.80)	15% (0.90)	10% (0.60)	5% (0.30)	5% (0.30)
wildrye, blue	ELGL	10% (0.60)	10% (0.60)	10% (0.60)		10% (0.60)	5% (0.30)	5% (0.30)			

Table 13. MLRA 61	PLANT SYMBOL ¹	Cy, CyO	Ly	LL, Ov	SL, SS	Sa, Sy	SwCy	SwLy	SwSy	VS	WL, Sb
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
wildrye, Canada	ELCA4	5% (0.30)		10% (0.60)		5% (0.30)					5% (0.30)
Forbs		10%	10%	15%	5%	5%	15%	15%	15%	5%	5%
blanketflower	GAAR	5% (0.35)	5% (0.35)	5% (0.35)		5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)		
coneflower, prairie	RACO3		5% (0.06)			5% (0.06)					
flax, prairie (Lewis)	LILE3	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		
gayfeather, dotted ⁵	LIPU			5% (0.32)					5% (0.32)		
milkvetch, Canada ¹⁰	ASCA11	5% (0.35)	5% (0.35)	5% (0.35)		5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)		
penstemon, narrowleaf ⁵	PEAN		5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		
penstemon, Rocky Mtn	PEST2	5% (0.08)	5% (0.08)	5% (0.08)		5% (0.08)	5% (0.08)	5% (0.08)	5% (0.08)		
prairie clover, purple	DAPU	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		
prairie clover, white	DACA7	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		
sunflower, Maximilian	HEMA2	5% (0.05)		5% (0.05)							5% (0.05)
yarrow, western ⁹	ACMI	5% (0.03)		5% (0.03)		5% (0.03)					5% (0.03)
Shrubs/Trees		5%	5%	15%	10%	5%	5%	5%	10%	15%	5%
ash, green ⁴	FRPE			5% (C)							
chokecherry ⁴	PRVIV	5% (C)		5% (C)							5% (C)
cottonwood, narrowleaf ⁴	POAN3			5% (C)	5% (C)						
greasewood ¹⁰	SAVE4				10% (0.10)						
hawthorn, northern ⁴	CRCH	5% (C)		5% (C)						5% (C)	5% (C)
juniper, Rocky Mountain ⁵	JUSC2									5% (C)	
pine, ponderosa	PIPO									10% (C)	
plum, American ⁴	PRAM	5% (C)		5% (C)							
rabbitbrush, rubber	ERNA10				5% (0.03)						
rose, Woods ⁵	ROWO			5% (0.05)		5% (0.05)			5% (0.05)		
sagebrush, big (Wyoming)	ARTRW8	5% (0.05)	5% (0.05)				5% (0.05)	5% (0.05)		5% (0.05)	
sagebrush, silver	ARCA13			5% (0.05)		5% (0.05)					
snowberry, western	SYOC	5% (0.15)		5% (0.15)		5% (0.15)			5% (0.15)		5% (0.15)
sumac, skunkbush ⁴	RHTR							5% (C)	5% (C)	5% (C)	
willow spp. ⁴	SALIX										5% (C)
winterfat	KRLA2						5% (0.05)	5% (0.05)			
yucca, soapweed	YUGL					5% (0.05)			5% (0.05)		

1 Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

2 Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Table 14. Species Percent Composition and Seed Rates for Revegetation of MLRA 62 – Zone 17 Black Hills (Forestland) Ecological Sites.

Table 14. MLRA 62	PLANT SYMBOL ¹	Cy	LyO	Ly	Ly (LRU 1&2)	SwLy (LRU 1&2)	SwLy (LRU 3), MP	Sb	SH	StOv	TU
		Species Percent Composition (%) ² and (Seed Rate in PLS lb/ac ³)									
Grass		75%	85%	75%	85%	85%	85%	85%	85%	90%	85%
bluegrass, Sandberg	POSE		40% (0.80)		50% (1.00)	50% (1.00)		40% (0.80)		50% (1.00)	
bluestem, big	ANGE	15% (0.90)	20% (1.20)	15% (0.90)			15% (0.90)	20% (1.20)	15% (0.90)		15% (0.90)
bluestem, little	SCSC	20% (0.80)		20% (0.80)			20% (0.80)		20% (0.80)		20% (0.80)
brome, mountain	BRMA4				20% (2.00)	20% (2.00)				20% (2.00)	
grama, blue	BOGR2	20% (0.40)		20% (0.40)			20% (0.40)		20% (0.40)		20% (0.40)
grama, sideoats	BOCU	20% (0.90)		20% (0.90)			20% (0.90)		20% (0.90)		20% (0.90)
needlegrass, green	NAVI4	20% (1.20)	10% (0.60)	20% (1.20)	30% (1.80)	30% (1.80)	10% (0.60)	10% (0.60)	10% (0.60)	30% (1.80)	20% (1.20)
prairie sandreed	CALO		20% (0.80)				15% (0.60)	20% (0.80)	15% (0.60)		
switchgrass	PAVI2		20% (0.50)					20% (0.50)			
wheatgrass, slender	ELTR7				50% (3.00)	50% (3.00)				50% (3.00)	
wheatgrass, thickspike ⁷	ELLAL				50% (3.00)	50% (3.00)				50% (3.00)	
wildrye, Virginia	ELVI3	10% (0.60)		10% (0.60)							10% (0.60)
wheatgrass, western ⁷	PASM	20% (1.20)	10% (0.60)	20% (1.20)			20% (1.20)	10% (0.60)	20% (1.20)		20% (1.20)
Forbs		10%	5%	15%	10%	10%	10%	5%	10%	5%	10%
coneflower, prairie	RACO3			5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)		5% (0.06)	5% (0.06)	5% (0.06)
milkvetch, Canada ¹⁰	ASCA11	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)	5% (0.35)
echinacea, purple coneflower	ECAN2	5% (0.06)		5% (0.06)	5% (0.06)	5% (0.06)	5% (0.06)		5% (0.06)	5% (0.06)	5% (0.06)
gayfeather, dotted ⁵	LIPU	5% (0.32)		5% (0.32)	5% (0.32)	5% (0.32)	5% (0.32)		5% (0.32)	5% (0.32)	5% (0.32)
leadplant	AMCA6	5% (0.25)					5% (0.25)		5% (0.25)		
prairie clover, purple	DAPU5	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)
prairie clover, white	DACA7	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)	5% (0.15)		5% (0.15)	5% (0.15)	5% (0.15)
sunflower, Maximilian	HEMA2		5% (0.50)					5% (0.05)			
sunflower, stiff	HEPA19	5% (0.13)	5% (0.13)					5% (0.13)			
yarrow, western ⁹	ACMI0	5% (.03)	5% (.03)	5% (.03)	5% (.03)	5% (.03)	5% (.03)	5% (.03)	5% (.03)	5% (.03)	5% (.03)
Shrubs/Trees		15%	10%	10%	5%	5%	5%	10%	5%	5%	5%
buffaloberry, silver ^{5, 11}	ELCO	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)	5% (C)
chokecherry ⁴	PRVIV	5% (C)	5% (C)	5% (C)				5% (C)			5% (C)
currant, golden ^{4, 5}	RIAU	5% (C)	5% (C)	5% (C)				5% (C)			5% (C)
dogwood, redosier ^{4, 5}	COSES		5% (C)					5% (C)			
serviceberry ⁴	AMAL2	5% (C)	5% (C)	5% (C)				5% (C)			5% (C)
snowberry, western	SYOC	5% (0.15)	5% (0.15)					5% (0.15)			

¹ Other species on the market and native to the area can be found using distribution data from PLANTS database (<https://plants.usda.gov>) or other credible data source.

² Maximum percent composition recommended for a seed mixture for restoring to the Reference State while providing diversity and multiple uses. Seeding for livestock forage or wildlife habitat/diversity may result in different species composition.

3 PLS rate (lb/ac) for drill seeding at the maximum recommended composition (%). Double the rate for broadcast or critical area seedings. If broadcast seeding in a critical area, the rate is 4x the normal drill rate.

4 Potted container stock (C), 10 cubic inch plugs, cuttings, or transplants preferred over seed.

5 Seed not routinely available on the market. Contract seed, containerized stock, or alternative species may be necessary.

6 Subspecies, variety, and/or locally sourced seed recommended to assure that seed is adapted to the soils and climate.

7 Collectively, rhizomatous wheatgrasses should not exceed 20% of a seed mixture when revegetation goals are to provide diversity, wildlife habitat, and/or restore native rangeland conditions. For other revegetation goals (e.g. forage production, erosion control), rhizomatous grass seed rates should not exceed the highest % composition of any one rhizomatous grass species.

8 Not native to WY, but native in surrounding states and adapted to WY (subject to approval by land manager on public lands).

9 Non-native and native varieties are available on the seed market. Non-natives may exhibit invasive characteristics on wetter sites and should be avoided when possible. Not an anticipated problem for drier sites.

10 Plant has toxic properties.

11 Nitrogen-fixing plant that will aid in successional restoration of the site and improve soil health.

Appendix 1. Species seeds per pound used to calculate the full stand drill seed rate (PLS lb/ac). Use the seeds per pound and recommended full stand rate when creating seed mixes.

Common Name	Scientific Name	Plant Code	Seeds/lb	Full Stand Drill Rate (PLS lb/ac)
GRASSES				
alkaligrass, Nuttall's	<i>Puccinellia nuttalliana</i>	PUNU2	2,100,000	1
alkali sacaton	<i>Sporobolus airoides</i>	SPAI	1,750,000	1
barley, meadow	<i>Hordeum brachyantherum</i>	HOBR2	100,000	8
bentgrass, creeping	<i>Agrostis stolonifera</i>	AGST2	6,129,840	0.5
bentgrass, rough	<i>Agrostis scabra</i>	AGSC5	5,000,000	0.5
blowout grass	<i>Redfieldia flexuosa</i>	REFL	4,480,000	0.25
bluegrass, alpine	<i>Poa alpina</i>	POAL2	1,069,921	1
bluegrass, big	<i>Poa secunda (P. ampla)</i>	POAM	882,000	2
bluegrass, Canada	<i>Poa compressa</i>	POCO	1,600,000	1.5
bluegrass, Canby	<i>Poa secunda (P. canbyi)</i>	POCA	925,000	2
bluegrass, fowl	<i>Poa palustris</i>	POPA2	1,900,000	0.5
bluegrass, mutton	<i>Poa fendleriana</i>	POFE	890,000	2
bluegrass, Nevada	<i>Poa secunda (P. nevadensis)</i>	POSE	1,029,000	2
bluegrass, Sandberg	<i>Poa secunda (P. sandbergii)</i>	POSE	900,000	2
bluegrass, Wheeler	<i>Poa nervosa</i>	PONE2	951,667	2
bluestem, big	<i>Andropogon gerardii</i>	ANGE	130,000	8
bluestem, little	<i>Schizachyrium scoparium</i> var. <i>scoparium</i>	SCSCS	260,000	4
bluestem, sand	<i>Andropogon hallii</i>	ANHA	113,000	9
brome, fringed	<i>Bromus ciliatus</i>	BRCI2	236,000	4
brome, mountain	<i>Bromus marginatus</i>	BRMA4	80,000	10
brome, nodding	<i>Bromus anomalus</i>	BRAN	142,000	19
buffalograss	<i>Bouteloua dactyloides</i>	BODA2	48,000	15
bulrush, alkali	<i>Bolboschoenus maritimus</i>	BOMA7	162,600	8
bulrush, chairmaker's	<i>Schoenoplectus americanus</i>	SCAM6	179,800	7
bulrush, hardstem	<i>Schoenoplectus acutus</i> var. <i>acutus</i>	SCACA	377,600	4
bulrush, panicle	<i>Schoenoplectus microcarpus</i>	SCMI2	4,500,000	0.5
bulrush, softstem	<i>Schoenoplectus tabernaemontani</i>	SCTA2	550,000	2
bulrush, three-square	<i>Schoenoplectus pungens</i>	SCPU10	300,000	5
cattail	<i>Typha latifolia</i>	TYLA	1,000,000	1
cordgrass, alkali	<i>Spartina gracilis</i>	SPGR	105,000	5
cordgrass, prairie	<i>Spartina pectinata</i>	SPPE	183,000	6
dropseed, prairie	<i>Sporobolus heterolepis</i>	SPHE	1,200,000	1
dropseed, sand	<i>Sporobolus cryptandrus</i>	SPCR	5,680,000	1
fescue, Idaho	<i>Festuca idahoensis</i>	FEID	450,000	2.5
fescue, rough	<i>Festuca campestris</i>	FECA4	171,000	6

Common Name	Scientific Name	Plant Code	Seeds/lb	Full Stand Drill Rate (PLS lb/ac)
fescue, Rocky Mountain	<i>Festuca saximontana</i>	FESA	450,000	1
fescue, sixweeks	<i>Vulpia octoflora</i>	VUOC	965,000	2
fescue, spike	<i>Leucopoa kingii</i>	LEKI2	200,000	7
fescue, western	<i>Festuca occidentalis</i>	FEOC	348,000	3
galleta grass	<i>Pleuraphis jamesii</i>	PLJA	159,000	3.5
grama, black	<i>Bouteloua eriopoda</i>	BOER4	1,335,000	1
grama, blue	<i>Bouteloua gracilis</i>	BOGR2	825,000	2
grama, hairy	<i>Bouteloua hirsuta</i>	BOHI2	800,000	1.5
grama, sideoats	<i>Bouteloua curtipendula</i>	BOCU	191,000	6
hairgrass, tufted	<i>Deschampsia cespitosa</i>	DECE	2,500,000	0.75
Indian ricegrass	<i>Achnatherum hymenoides</i>	ACHY	235,000	5
Indiangrass	<i>Sorghastrum nutans</i>	SONU2	170,000	6
lovegrass, sand	<i>Eragrostis trichodes</i>	ERTR3	1,500,000	1
mannagrass, American	<i>Glyceria grandis</i>	GLGR	1,280,000	1
mannagrass, tall (fowl)	<i>Glyceria striata</i>	GLST	1,600,000	1
muhly, alkali	<i>Muhlenbergia asperifolia</i>	MUAS	1,500,000	0.75
muhly, mat	<i>Muhlenbergia richardsonis</i>	MURI	1,500,000	1
muhly, marsh	<i>Muhlenbergia racemosa</i>	MURA	1,280,000	1
muhly, mountain	<i>Muhlenbergia montana</i>	MUMO	1,500,000	0.75
muhly, plains	<i>Muhlenbergia cuspidata</i>	MUCU3	1,200,000	1
needle and thread	<i>Hesperostipa comata</i>	HECO26	115,000	9
needlegrass, Columbia	<i>Achnatherum nelsonii</i>	ACNE9	180,000	5
needlegrass, green	<i>Nassella viridula</i>	NAVI4	186,000	6
needlegrass, Letterman's	<i>Achnatherum lettermanii</i>	ACLE9	225,000	5
needlegrass, western	<i>Achnatherum occidentale</i>	ACOC3	311,000	5
oatgrass, California	<i>Danthonia californica</i>	DACA3	40,000	22
oatgrass, onespike	<i>Danthonia unispicata</i>	DAUN	400,000	2
prairie Junegrass	<i>Koeleria macrantha</i>	KOMA	2,300,000	1
prairie sandreed	<i>Calamovilfa longifolia</i>	CALO	273,000	4
reed canarygrass	<i>Phalaris arundinacea</i>	PHAR3	602,000	2
reedgrass, bluejoint	<i>Calamagrostis canadensis</i>	CACA4	3,800,000	0.5
reedgrass, northern	<i>Calamagrostis stricta</i> spp. <i>inexpansa</i>	CASTI3	3,500,000	0.5
rush, mountain (Baltic)	<i>Juncus arcticus</i> ssp. <i>littoralis</i>	JUARL	10,900,000	0.1
rush, poverty	<i>Juncus tenuis</i>	JUTE	5,130,000	0.5
rush, swordleaf	<i>Juncus ensifolius</i>	JUEN	2,914,000	0.5
saltgrass, inland	<i>Distichlis spicata</i>	DISP	519,000	4
sedge, analogue	<i>Carex simulata</i>	CASI2	1,043,000	1
hsedge, awlfruit	<i>Carex stipata</i>	CAST5	654,000	3
sedge, dunhead	<i>Carex phaeocephala</i>	CAPH2	664,900	3

Common Name	Scientific Name	Plant Code	Seeds/lb	Full Stand Drill Rate (PLS lb/ac)
sedge, golden	<i>Carex aurea</i>	CAAU3	500,000	2
sedge, inland	<i>Carex interior</i>	CAIN11	500,000	2
sedge, meadow	<i>Carex praegracilis</i>	CAPR5	664,900	1.5
sedge, Nebraska	<i>Carex nebrascensis</i>	CANE2	534,100	2
sedge, slough	<i>Carex obnupta</i>	CAOB3	567,000	2
sedge, smallwing	<i>Carex microptera</i>	CAMI7	847,000	2
sedge, water	<i>Carex aquatilis</i>	CAAQ	450,000	1
sedge, woolly	<i>Carex pellita</i>	CAPE42	312,075	5
sloughgrass, American	<i>Beckmannia syzigachne</i>	BESY	238,000	5
spikerush, beaked	<i>Eleocharis rostellata</i>	ELRO2	349,000	3
spikerush, common	<i>Eleocharis palustris</i>	ELPA3	620,000	2
squirreltail, bottlebrush	<i>Elymus elymoides</i>	ELEL5	192,000	5
switchgrass	<i>Panicum virgatum</i>	PAVI2	389,000	3
threeawn, Fendler's	<i>Aristida purpurea</i> var. <i>fendleriana</i>	ARPUF	300,000	4
timothy, alpine	<i>Phleum alpinum</i>	PHAL2	1,044,690	1
trisetum, spike	<i>Trisetum spicatum</i>	TRSP2	2,500,000	1
wheatgrass, beardless	<i>Pseudoroegneria spicata</i> spp. <i>inermis</i>	PSSPI	145,000	7
wheatgrass, bluebunch	<i>Pseudoroegneria spicata</i>	PSSP6	139,000	7
wheatgrass, Montana	<i>Elymus albicans</i>	ELAL7	150,000	6
wheatgrass, slender	<i>Elymus trachycaulus</i>	ELTR7	140,000	7
wheatgrass, Snake River	<i>Elymus wawawaiensis</i>	ELWA2	135,000	7
wheatgrass, streambank	<i>Elymus lanceolatus</i> spp. <i>lanceolatus</i> (riparius)	ELLAL	152,000	7
wheatgrass, thickspike	<i>Elymus lanceolatus</i> spp. <i>lanceolatus</i>	ELLAL	152,000	7
wheatgrass, western	<i>Pascopyrum smithii</i>	PASM	93,000	10
wildrye, basin	<i>Leymus cinereus</i>	LECI4	144,000	7
wildrye, blue	<i>Elymus glaucus</i>	ELGL	134,000	7
wildrye, Canada	<i>Elymus canadensis</i>	ELCA4	115,000	8
wildrye, saline	<i>Leymus salinus</i> ssp. <i>salinus</i>	LESAS	130,000	6
FORBS				
arnica, heartleaf	<i>Arnica cordifolia</i>	ARCO9	220,000	4
aster, gray	<i>Eurybia glauca</i>	EUGL19	800,000	1
aster, New England	<i>Symphyotrichum novae-angliae</i>	SYNO2	1,100,000	1.4
aster, western	<i>Symphyotrichum ascendens</i>	SYAS3	2,668,235	0.5
balsamroot, arrowleaf	<i>Balsamorhiza sagittata</i>	BASA3	58,400	11
balsamroot, cutleaf	<i>Balsamorhiza macrophylla</i>	BAMA4	55,000	18
balsamroot, Hooker's	<i>Balsamorhiza hookeri</i>	BAHO	55,000	18
beeplant, Rocky Mountain	<i>Cleome serrulata</i>	CLSE	64,000	13.5

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beeplant, yellow	<i>Cleome lutea</i>	CLLU2	101,000	11
bergamot (bee-balm)	<i>Monarda fistulosa</i>	MOFI	1,272,500	1
biscuitroot, bigseed	<i>Lomatium macrocarpum</i>	LOMA3	49,293	15
biscuitroot, cous	<i>Lomatium cous</i>	LOCO4	100,000	8
biscuitroot, fernleaf	<i>Lomatium dissectum</i>	LODI	45,000	24
biscuitroot, Gray's	<i>Lomatium grayi</i>	LOGR	45,000	24
biscuitroot, nineleaf	<i>Lomatium triternatum</i>	LOTR2	42,000	24
bistort, American	<i>Polygonum bistortoides</i>	POBI6	125,000	7
black-eyed Susan	<i>Rudbeckia hirta</i>	RUHI2	1,746,000	0.8
blanketflower	<i>Gaillardia aristata</i>	GAAR	186,000	6
blazingstar, dotted	<i>Liatris punctata</i>	LIPU	136,000	7.5
blazingstar, tenpetal	<i>Mentzelia decapetala</i>	MEDE2	328,500	3.3
bluebells, mountain	<i>Mertensia ciliata</i>	MECI3	225,000	4
buckwheat, parsnipflower	<i>Eriogonum heracleoides</i>	ERHE2	170,000	7
buckwheat, sulfur flower	<i>Eriogonum umbellatum</i>	ERUM	140,500	9
buckwheat, whorled	<i>Eriogonum heracleoides</i>	ERHE2	135,700	4
buttercup, sagebrush	<i>Ranunculus glaberrimus</i>	RAGL	25,000	25
cinquefoil, silverweed	<i>Argentina anserina</i>	ARAN7	1,200,000	1
columbine, Colorado blue	<i>Aquilegia coerulea</i>	AQCO	368,000	3
coneflower, prairie	<i>Ratibida columnifera</i>	RACO3	600,000	2
coneflower, western	<i>Rudbeckia occidentalis</i>	RUOC2	345,000	3
cowparsnip	<i>Heracleum maximum</i>	HEMA80	47,569	15
curlycup gumweed	<i>Grindelia squarrosa</i>	GRSQ	410,000	3
daisy, cutleaf	<i>Erigeron compositus</i>	ERCO4	250,000	3
daisy, fleabane (aspen)	<i>Erigeron speciosus</i>	ERSP4	1,600,000	0.5
dandelion, mountain	<i>Agoseris glauca</i>	AGGL	560,000	1.5
dustymaiden, Douglas	<i>Chaenactis douglasii</i>	CHDO	342,500	3
echinacea (eastern coneflower)	<i>Echinacea purpurea</i>	ECPU	115,664	8
echinacea, purple coneflower	<i>Echinacea angustifolia</i>	ECAN2	128,000	9
elephanthead lousewort	<i>Pedicularis groenlandica</i>	PEGR2	175,000	5
evening primrose, common	<i>Oenothera biennis</i>	OEBI	1,376,000	1.4
evening primrose, Hooker's	<i>Oenothera elata</i>	OEEL	1,400,000	1
evening primrose, pale (white)	<i>Oenothera pallida</i>	OEPA	700,000	1.5
evening primrose, tufted	<i>Oenothera caespitosa</i>	OECA10	1,300,000	1
fireweed	<i>Chamerion angustifolium</i>	CHAN9	6,800,000	0.5
flax, Lewis	<i>Linum lewisii</i>	LILE3	294,000	3.5
geranium, sticky	<i>Geranium viscosissimum</i>	GEVI2	55,000	1.4
giant hyssop, nettleleaf	<i>Agastache urticifolia</i>	AGUR	1,400,000	1
globemallow, gooseberryleaf	<i>Sphaeralcea grossulariifolia</i>	SPGR2	500,500	2

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globemallow, Munro's	<i>Sphaeralcea munroana</i>	SPMU2	365,800	2
globemallow, scarlet	<i>Sphaeralcea coccinea</i>	SPCO	500,000	2
goldenaster, hairy	<i>Heterotheca villosa</i>	HEVI4	336,500	3.2
goldenbanner, mountain	<i>Thermopsis montana</i>	THMO6	30,600	7.3
goldeneye, showy	<i>Helioomeris multiflora</i>	HEMU3	1,000,000	1
goldenrod, Canada	<i>Solidago canadensis</i>	SOCA6	4,600,000	0.5
goldenrod, gray	<i>Solidago nemoralis</i>	SONE	4,800,000	0.5
goldenrod, Missouri	<i>Solidago missouriensis</i>	SOMI2	2,000,000	1
goldenrod, stiff	<i>Oligoneuron rigidum var. humile</i>	OLRIH	735,000	1.4
groundsel, woolly	<i>Packera cana</i>	PACA15	600,000	1.5
harebell	<i>Campanula rotundifolia</i>	CARO2	1,200,000	1
hawksbeard, tapertip	<i>Crepis acuminata</i>	CRAC2	800,000	1
Indian paintbrush, downy	<i>Castilleja sessiliflora</i>	CASE5	1,540,000	0.5
Indian paintbrush, lesser	<i>Castilleja minor ssp. minor</i>	CAMIM6	4,586,000	0.5
Indian paintbrush, splitleaf	<i>Castilleja rhexiifolia</i>	CARH4	4,900,000	0.5
Indian paintbrush, sulphur	<i>Castilleja sulphurea</i>	CASU12	4,500,000	0.5
Indian paintbrush, wavyleaf	<i>Castilleja applegatei</i>	CAAP4	325,000	3
Indian paintbrush, Wyoming	<i>Castilleja linariifolia</i>	CALI4	4,915,000	0.3
iris, Rocky Mountain	<i>Iris missouriensis</i>	IRMI	20,000	10
leadplant	<i>Amorpha canescens</i>	AMCA6	90,000	1
licorice, American	<i>Glycyrrhiza lepidota</i>	GLLE3	52,688	15
lupine, silky	<i>Lupinus sericeus</i>	LUSE4	20,000	20
lupine, silver	<i>Lupinus argenteus</i>	LUAR3	126,000	8.6
marigold, marsh	<i>Caltha leptosepala</i>	CALE4	400,000	2
milkvetch, basalt	<i>Astragalus filipes</i>	ASFI	120,000	7
milkvetch, Canada	<i>Astragalus canadensis</i>	ASCA11	270,000	4
milkvetch, woollypod	<i>Astragalus purshii</i>	ASPU9	120,000	7
milkweed, common	<i>Asclepias syriaca</i>	ASSY	68,000	17
milkweed, showy	<i>Asclepias speciosa</i>	ASSP	75,000	15
milkweed, swamp	<i>Asclepias incarnata</i>	ASIN	153,761	15
mint, common	<i>Mentha arvensis</i>	MEAR4	5,000,000	0.3
monkeyflower, seep	<i>Mimulus guttatus</i>	MIGU	4,000,000	0.5
mule-ears	<i>Wyethia amplexicaulis</i>	WYAM	28,221	35
owl's-clover, yellow	<i>Orthocarpus luteus</i>	ORLU2	3,492,307	0.5
penstemon, beardtongue	<i>Penstemon grandiflorus</i>	PEGR7	550,000	4
penstemon, blue	<i>Penstemon cyaneus</i>	PECY3	290,000	3
penstemon, firecracker	<i>Penstemon eatonii</i>	PEEA	315,000	3
penstemon, fuzzytongue	<i>Penstemon eriantherus</i>	PEER	358,000	3
penstemon, Great Basin (smooth)	<i>Penstemon subglaber</i>	PESU2	405,000	2

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penstemon, littleflower	<i>Penstemon procerus</i>	PEPR2	600,000	2
penstemon, narrowleaf	<i>Penstemon angustifolia</i>	PEAN4	313,000	3.5
penstemon, Palmer's	<i>Penstemon palmeri</i>	PEPA8	294,000	2
penstemon, Rocky Mountain	<i>Penstemon strictus</i>	PEST2	478,000	2
penstemon, thickleaf	<i>Penstemon pachyphyllus</i>	PEPA6	227,600	4
penstemon, Venus	<i>Penstemon venustus</i>	PEVE2	1,090,000	2
phacelia, silverleaf	<i>Phacelia hastata</i>	PHHA	153,000	7
prairie clover, purple	<i>Dalea purpurea</i>	DAPU5	317,000	3.5
prairie clover, white	<i>Dalea candida</i>	DACA7	278,000	4
ragwort, lambstongue	<i>Senecio integerrimus</i>	SEIN2	400,000	5
scarlet gilia	<i>Ipomopsis aggregata</i>	IPAG	360,000	6
sego lily	<i>Calochortus nuttallii</i>	CANU3	190,000	4.5
sneezeweed, common	<i>Helenium autumnale</i>	HEAU	1,464,516	1
sunflower, annual	<i>Helianthus annuus</i>	HEAN3	81,000	13
sunflower, common woolly	<i>Eriophyllum lanatum</i>	ERLA6	810,000	1
sunflower, Maximilian	<i>Helianthus maximiliani</i>	HEMA2	250,000	4
sunflower, Nuttall's	<i>Helianthus nuttallii</i>	HENU	125,000	9
sunflower, oneflower	<i>Helianthella uniflora</i>	HEUN	41,000	26
sunflower, stiff	<i>Helianthus pauciflorus</i>	HEPA19	85,000	12.8
sweet anise	<i>Osmorhiza occidentalis</i>	OSOC	29,845	30
sweetvetch, northern	<i>Hedysarum boreale</i>	HEBO	34,000	25
sweetvetch, silver	<i>Hedysarum boreale</i> spp. <i>mackenziei</i>	HEBOM	34,000	24
tansyaster, hoary	<i>Machaeranthera canescens</i>	MACA2	1,300,000	1
verbena, blue	<i>Verbena hastata</i>	VEHA2	1,792,800	0.5
vetch, America	<i>Vicia americana</i>	VIAM	33,000	33
violet, hookedspur	<i>Viola adunca</i>	VIAD	2,000,000	1
yarrow, western	<i>Achillea millefolium</i> var. <i>occidentalis</i>	ACMIO	4,400,000	0.25
SHRUBS / SUB-SHRUBS				
ceanothus, snowbrush	<i>Ceanothus velutinus</i>	CEVE	124,275	1
Oregon grape	<i>Mahonia repens</i>	MARE11	66,560	1
rabbitbrush, green (yellow)	<i>Chrysothamnus viscidiflorus</i>	CHVI8	782,000	1
rabbitbrush, rubber	<i>Ericamera nauseosa</i>	ERNA10	693,000	1
sagebrush, big	<i>Artemisia tridentata</i>	ARTR2	2,500,000	0.5
sagebrush, basin big	<i>Artemisia tridentata</i> ssp. <i>tridentata</i>	ARTRT	2,400,000	0.5
sagebrush, mountain big	<i>Artemisia tridentata</i> ssp. <i>vaseyana</i>	ARTRV	2,000,000	0.5
sagebrush, Wyoming big	<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i>	ARTRW8	2,400,000	0.5

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sagebrush, birdfoot	<i>Artemisia pedatifida</i>	ARPE6	4,500,000	0.25
sagebrush, black	<i>Artemisia nova</i>	ARNO4	952,700	0.5
sagebrush, bud	<i>Picrothamnus desertorum</i>	PIDE4	900,000	1
sagebrush, early or alkali (little)	<i>Artemisia arbuscula</i> ssp. <i>longiloba</i>	ARARL	972,000	1
sagebrush, low (little)	<i>Artemisia arbuscula</i> ssp. <i>arbuscula</i>	ARARA	972,000	1
sagebrush, sand	<i>Artemisia filifolia</i>	ARFI2	2,000,000	0.5
sagebrush, mountain silver	<i>Artemisia cana</i> ssp. <i>viscidula</i>	ARCAV2	1,132,182	1
sagebrush, plains silver	<i>Artemisia cana</i> ssp. <i>cana</i>	ARCAC5	1,132,182	1
sagebrush, threetip	<i>Artemisia tripartita</i>	ARTR4	2,195,000	0.5
sagewort, cudweed (white sage)	<i>Artemisia ludoviciana</i>	ARLU	4,500,000	0.25
sagewort, fringed (prairie)	<i>Artemisia frigida</i>	ARFR4	4,536,000	0.25
sagewort, green (tarragon)	<i>Artemisia dracunculus</i>	ARDR4	4,500,000	0.25
saltbush, fourwing (de-winged)	<i>Atriplex canescens</i>	ATCA2	44,000	4
saltbush, fourwing (winged)	<i>Atriplex canescens</i>	ATCA2	22,000	8
saltbush, Gardner's	<i>Atriplex gardneri</i>	ATGA	111,500	1
saltbush, mat	<i>Atriplex corrugata</i>	ATCO4	100,900	5
saltbush, moundscale (de-winged)	<i>Atriplex aptera</i>	ATAP	49,000	4
saltbush, moundscale (winged)	<i>Atriplex aptera</i>	ATAP	24,500	8
saltbush, shadscale	<i>Atriplex confertifolia</i>	ATCO	61,000	5
saltbush, trident (basin)	<i>Atriplex tridentata</i>	ATTR3	65,000	5
snakeweed, broom	<i>Gutierrezia sarothrae</i>	GUSA2	225,000	1
spiny hopsage	<i>Grayia spinosa</i>	GRSP	347,000	1
winterfat (fluffy)	<i>Krascheninnikovia lanata</i>	KRLA2	54,000	6
winterfat (naked)	<i>Krascheninnikovia lanata</i>	KRLA2	93,000	3
yucca, soapweed	<i>Yucca glauca</i>	YUGL	25,000	8
SHRUBS/TREES	Establish by transplants or cuttings			
alder, speckled	<i>Alnus incana</i> ssp. <i>rugosa</i>	ALINR	1,084,250	N/A
alder, thinleaf	<i>Alnus incana</i>	ALIN2	N/A	N/A
ash, green	<i>Fraxinus pennsylvanica</i>	FRPE	17,260	N/A
aspen, quaking	<i>Populus tremuloides</i>	POTR5	3,248,000	0.25
birch, bog	<i>Betula pumila</i>	BEPU4	N/A	N/A
birch, water	<i>Betula occidentalis</i>	BEOC2	402,000	N/A
bitterbrush, antelope	<i>Purshia tridentata</i>	PUTR2	15,400	5
boxelder	<i>Acer negundo</i>	ACNE2	13,400	N/A
buffaloberry, Canada	<i>Shepherdia canadensis</i>	SHCA	57,563	5
buffaloberry, silver	<i>Shepherdia argentea</i>	SHAR	31,000	N/A
cinquefoil, shrubby	<i>Dasiphora fruticosa</i>	DAFR6	1,500,000	0.5

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chokecherry	<i>Prunus virginiana</i>	PRVI	4,800	10
cottonwood, black	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	POBAT	N/A	N/A
cottonwood, narrowleaf	<i>Populus angustifolia</i>	POAN3	1,000,000	N/A
cottonwood, plains	<i>Populus deltoides</i> ssp. <i>monilifera</i>	PODEM	364,500	N/A
current, golden	<i>Ribes aureum</i>	RIAU	268,545	1
current, wax	<i>Ribes cereum</i>	RICE	277,500	1
dogwood, bunchberry	<i>Cornus canadensis</i>	COCA13	69,430	1
dogwood, redosier	<i>Cornus sericea</i>	COSE16	18,500	2
elderberry, blue	<i>Sambucus nigra</i>	SANIC5	197,590	2
elderberry, red	<i>Sambucus racemosa</i>	SARA2	286,000	2
greasewood	<i>Sarcobatus vermiculatus</i>	SAVE4	245,333	1
hawthorn, black	<i>Crataegus douglasii</i>	CRDO2	22,600	N/A
hawthorn, northern	<i>Crataegus chrysocarpa</i>	CRCH	N/A	N/A
juniper, common	<i>Juniperus communis</i>	JUCO6	36,500	N/A
juniper, horizontal	<i>Juniperus horizontalis</i>	JUHO2	29,500	2
juniper, Rocky Mountain	<i>Juniperus scopulorum</i>	JUSC2	27,100	N/A
juniper, Utah	<i>Juniperus osteosperma</i>	JUOS	5,217	1
kinnikinnick	<i>Arctostaphylos uva-ursi</i>	ARUV	42,400	1
laurel, alpine	<i>Kalmia microphylla</i>	KAMI	N/A	N/A
maple, Rocky Mountain	<i>Acer glabrum</i> var. <i>glabrum</i>	ACGL	27,100	1
mountain mahogany, curl-leaf	<i>Cercocarpus ledifolius</i>	CELE3	51,000	1.5
mountain mahogany, true	<i>Cercocarpus montanus</i>	CEMO2	47,406	5
oak, bur	<i>Quercus macrocarpa</i>	QUMA2	75	N/A
pine, limber	<i>Pinus flexilis</i>	PIFL2	N/A	N/A
pine, ponderosa	<i>Pinus ponderosa</i>	PIPO	12,600	N/A
plum, American	<i>Prunus americana</i>	PRAM	870	N/A
rose, Arkansas	<i>Rosa arkansana</i>	ROAR3	29,107	1
rose, Wood's	<i>Rosa woodsii</i>	ROWO	50,000	4
sandcherry, western	<i>Prunus pumila</i> var. <i>besseyi</i>	PRPUB	2,400	10
serviceberry, Saskatoon	<i>Amelanchier alnifolia</i>	AMAL2	82,000	1
silverberry	<i>Elaeagnus commutata</i>	ELCO	3,800	N/A
snowberry, common	<i>Symphoricarpos albus</i>	SYAL	76,000	3
snowberry, mountain	<i>Symphoricarpos oreophilus</i>	SYOR2	54,738	3
snowberry, western	<i>Symphoricarpos occidentalis</i>	SYOC	74,400	3
sumac, skunkbush	<i>Rhus trilobata</i>	RHTR	20,300	2
sumac, smooth	<i>Rhus glabra</i>	RHGL	59,775	2
willow	<i>Salix</i> spp.	SALIX	2,500,000	N/A
willow, coyote (narrowleaf)	<i>Salix exigua</i>	SAEX	N/A	N/A